RESEARCH REPORT

COMPRESSED EARTH BLOCK CONSTRUCTION

EXTERNAL RESEARCH PROGRAM

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Compressed Earth Block Construction

Home to Canadians

Canada Mortgage and Housing Corporation

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Prepared by:

Ginette Dupuy, B. Arch., M.A.Sc., Development

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Purpose

The purpose of this research project is, first of all, to answer the question as to whether the soils in Quebec are suitable for compressed earth block construction. Soil was studied from areas within a 150 km radius of Montréal. Thirteen soil samples were brought to the Université de Sherbrooke for analysis.

The second purpose of this research project is to certify earth material. Three of the soils were chosen to make compressed earth blocks. With the help of the École nationale des travaux publics de l'État (ENTPE), five groups of 20 blocks were made. After being cured and dried, these blocks were sent to Concordia University for thermal and compression tests.

The third purpose of this research project is to simulate walls made up with this material. With this data, various walls made of compressed earth blocks were simulated using EMPTY software. Will these walls survive our rigorous winters? This research project will allow architects, builders and self-builders, and everyone who wants to build using healthy and environmentally sound methods, to use this material.

Acknowledgements

I would like to thank first of all Dr. Christian DeLaet, who introduced me to this wonderful material.

I would also like to thank Mr. Guy Lefebvre of the Université de Sherbrooke, who believed in this project. Without this initial support, this project would never have been realized.

I would like to thank Mr. Ali Mesbah of the ENTPE in Lyons, France. Mr. Mesbah, research engineer and earth material specialist came here to help me make the blocks. While he was in Quebec, Mr. Mesbah was an excellent teacher, not only to me but also to many other people who were interested in the *earth material*.

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I would like to give special thanks to Ms. Myriam Olivier who, many years ago, was one of my professor at the École d'architecture of the Université de Grenoble, at the Centre de recherche en architecture de terre (CRATerre) [Earth Architecture Research Centre], where I studied earth construction. Since then, she has encouraged me, supported me in my research on earth construction. Ms. Olivier has a Ph.D. in compressed earth blocks.

Finally, I would also like to give special thanks to my tutor for this project at CMHC, Mr. Christopher Ives, for having seen this material's potential and for providing guidance throughout this project.

Summary

The construction materials used in building our homes cannot be qualified as harmless or economical. In fact, a great deal of energy is needed to get the raw materials that constitute them, to transport them, to process them and, finally, to produce and deliver them. At these various stages, these materials pollute the water, the air and the soil and, once installed in a home, they emit substances that are often harmful to the health of the occupants.

The forest filters pollution. But, adding the threat of deforestation, acid rain and risks of fire, it becomes important to protect the forest. Yet, in Canada, homes have wood frames.

It is therefore imperative to find a material that consumes less energy, that does not pollute the water, the air and the soil, and that protects the forests. There is a material that has been used since the most ancient times, that is now used by over one third of the inhabitants of this planet, and that is currently raising renewed interest in Europe, the United States, Australia and third-world countries. This material is *earth*.

There exist several earth construction methods. Nowadays, compressed earth technology is the most widely known and best mastered method. The use of presses is relatively recent. It was only around 1957 that the first machine specially designed to produce raw earth blocks was marketed. Manual, mechanical or hydraulic presses can now be found on the market, depending on the project and the budget.

The production of compressed earth blocks requires earth that is slightly moist, as found in nature. The earth is placed into a press. The production of these blocks is similar to that of bricks, except for the firing stage. Sands and gravel serve as skeleton, while clay acts as a binder. The reduction in the volume of the gaps decreases its sensitivity to water and increases its resistance. The blocks are dried before they are used.

Is the earth found here appropriate for the production of compressed earth blocks? Would these blocks be suitable to build our homes and, if yes, would compressed earth blocks construction survive our rigorous winters? These three key questions summarize this research projet. All the earth excavated here to prevent foundations from freezing could perhaps be wisely used.

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Introduction

The *Earth Material*

Materials traditionally used in building our homes cannot be characterized either as harmless or economical. Think of all the energy needed to get the raw materials that constitute them, transport them, process them and, finally, to produce and deliver them! Furthermore, at these various stages, these energy-consuming materials pollute water, air and soil and, once installed in housing, they emit substances that are often harmful to the health of the occupants.

To compensate for these drawbacks, the forest tries to defend nature: it filters pollution, acts as a sponge to retain water, slows erosion, allows clouds to form and protects fauna and flora. In Canada, houses are generally made of wood. In addition to this use, add deforestation, acid rain and risks of fire: forests are under great stress. Thus, it is imperative to consider a new building material, one that needs less energy to manufacture, that does not pollute water, air, soil or our homes and, finally, one that spares our forests.

There is a material that is already used by more than one third of the planet's population and that, in one form or another, is currently raising renewed interest in Europe, the United States, Australia and Third World countries: the *earth material.*

History of Earth Construction

We only need to take a look back in time to see that earth seems to be man's preferred construction material, from antiquity, in particular for the famous Tower of Babel and for the first dwellings in Syria (cities over 8,000 years old) to today. As early as the 5th century B.C., China began construction of its famous Wall, of which many sections were built from compacted earth. From antiquity to the Middle Ages, this material was used in abundance in Europe, Asia, Africa and the Middle East. In North America, the Indians in the Southwest started using this method of construction very early: the architecture of pueblos testifies, in fact, to their impeccable mastery of raw adobe.

But it is only in the 18th century and throughout the 19th century that raw earth housing makes a reappearance in most of the rural areas in Europe. In France, the French architect François Cointeraux (1740-1830) was a great proponent of this technique that makes it possible to build economical, healthy and durable housing. His writings, contained in no fewer than 72 fascicles, most of which have been translated in several languages and circulated in Germany, Denmark, the United States and even Australia, are most certainly not unrelated to the dissemination of this way of building in these countries.

Earth construction continued in Europe until the 1950s, after an amazing renewal following the Second World War, a period marked by a shortage of industrial material and housing for those stricken by the war.

Closer to home, the municipality of Thornhill, a suburb of Toronto, takes pride in its Heintzman House (the piano factory), built in 1817. Plush and elegant, it is finished with an exterior leveling coat that reveals nothing of the true nature of the walls' composition.

During the oil crisis in 1973, it did not take long for the benefits of earth construction to be rediscovered. Students at the École d'architecture de Grenoble [Grenoble school of architecture], focusing their research projects on economical methods of construction, very soon directed their efforts on the *earth material*. Thus CRATerre was born, the Centre de recherche en architecture de terre [Earth Architecture Research Centre], which became an international centre in this discipline. About 15 years ago, the technology disseminated by this organization originated a unique village, the estate at Terre de l'Isle d'Abeau, near Lyons, entirely built from raw earth, using various construction techniques.

There is a counterpart to the estate at Terre de l'Isle d'Abeau in the United States. The urban residential area "La Luz" was created in 1975 by architect Antoine Predock, using adobe bricks. This marked a decisive step in the revival of construction using raw earth. The United States has now officially legitimized the use of adobe and cob by integrating these building techniques into national and regional standards. In 20 years, David Easton has built more than 100 residential and commercial buildings using rammed earth, mostly in California, where he lives, but also everywhere around the world.

Australia is the country that has most successfully integrated earth construction. Indeed, 20 per cent of new housing is built using earth construction.

Compressed Earth Blocks

There exist many earth construction techniques. These days, compressed earth technology is one of the best known and most mastered. The compressed earth block falls into this category.

The production of compressed earth blocks requires soil that is slightly moist, as found in nature. It is poured into a manual, mechanical or hydraulic press. The production of these blocks is similar to that of bricks, except for the firing stage. In the past, blocks were compressed manually. The use of presses is relatively recent. It was only around 1957 that the first machine specially designed to produce raw earth blocks was marketed: the Cinva-Ram press. Today, the range of pressing material has greatly increased, meeting the need for various techniques and prices. This technology is well-suited to industrialization.

Compressed earth blocks offer tremendous benefits:

- The blocks are manufactured under shelter, contrary to other techniques.
- Quality control is ensured throughout the manufacturing process.
- The application is well known. A mason installs the compressed earth blocks.
- The compressed earth blocks have time to dry, preventing any significant setback of the walls.
- It is possible to use high-performance mechanical or hydraulic presses, making the earth blocks a modern material.

Compressed earth block production process will be explained throughout the document.

Soil Survey

The Earth is covered with a layer of basaltic and granitic rock 10 to 40 km thick. On top of this more or less solid layer is a thin layer of varying thickness called soil. The size of these materials which constitute this layer varies considerably, from microscopic mineral particles to huge stones. Alteration, as well as other geologic events work on the rocks on the surface of the earth or in the superficial section of the subsurface to make this unconsolidated material called soil. Alteration modifies the composition and the structure of the rock, chemically and physically. Physical or mechanical alteration causes the rock to disintegrate into small particles. The causes of physical alteration include freeze-thaw cycles, temperature changes and erosion, as well as human, animal and vegetable activity. Chemical alteration causes the minerals in the rock to decompose, through oxidation, reduction, carbonation and other chemical events. Generally speaking, chemical alteration induced by water plays a bigger role in the formation of clays than physical alteration. Therefore it can be said that soil is the result of the alteration of rocks and that it is in constant formation.

Soil Composition

Soils are composed of a mixture of particles that vary in size. The soils that interest us for earth construction are composed of particles of gravel, sand, silt and clay. Soils can be classified according to size, into two categories: coarse-grained soils, gravels and sands; and fine-grained soils, silt and clays. The demarcation between the two corresponds to the diameter of the smallest particle visible to the naked eye, approximately 0.05 mm.

Gravels and Sands

They constitute the skeleton of the soil. They generally remain stable when they come in contact with water, offer no cohesion, but significant friction that counters the internal movement of the particles. There are many granulometric classification systems, but according to the international classification used by the Université de Sherbrooke, the size of gravel is < 80 mm and > 5 mm. The size of sand is < 5 mm and > 80 µm.

Silt

They are a cross between sands and clays: they are fine-grained, but they are neither plastic nor coherent. However, soils that are commonly called silt include a certain proportion of clay particles, and therefore more or less pronounced plastic properties. According to the system used by the Université de Sherbrooke, silt is < 80 µm and > 2 µm.

Clays

Clays are the joining of a large number of sheets. The crystal structure of clay particles gives them a set of behavioural properties (cohesion, plasticity, water absorption, swell, shrinkage). Indeed, they are very small particles, very active electro-chemically. According to the Université de Sherbrooke, the size of clays is < 2 µm. Clays are classified into three main types:

- Kaolinite: kaolinite is composed of a series of alternating layers of two kinds of sheets. The bond between the sheets is very strong and prevents hydratation; water can only access the external surface of this type of clay.
- Montmorillonite: montmorillonite is composed of three joined sheets. The bond between the sheets is weak, so that the water

molecules find space not only on the external surface (like kaolinite), but also between the sheets. Soils containing montmorillonites can therefore swell if their water content increases.

- Illite: its structure is similar to that of montmorillonite, but the spaces between the layers are connected by a potassium atom. Water is therefore repelled between the sheets, and has access only to the external surface.

Therefore, the only type of clay that should not be used is montmorillonite. According to Mr. Guy Lefebvre of the Université de Sherbrooke, in general, the type of clay in Quebec does not swell much.

Surface Deposits

The Government of Quebec has created maps called surface deposits maps, which were used, in this project, for the soil survey. These maps and the *Guide pratique d'identification des dépôts de surface au Québec* [Practical Guide to Identify Surface Deposits in Quebec] were a great help in the study of these soils.

Surface deposits were set in place either during the last glacial stage or more recently as a result of alteration, as described above. The deposits which are of interest to this project, for example, the deposits containing gravels, sands, silt and clays, and which are in large quantity within a 150 km radius of Montréal, are glacial deposits and marine deposits. Fluvial, lake and marine littoral deposits are also deposits that could contain the desired granulometry to produce compressed earth blocks, but they are in small quantities.

Glacial Deposits

These deposits originate from the direct action of glaciers. The ice, especially at the base of the glacier, is full of debris of a size that varies between clays and big rocks. These materials come from the rocky ground over which the glacier advances. In the area at issue, a 150 km radius around Montréal, the sedimentary rocks of the lowlands and Appalachians constitute this rocky ground. The rock matrix of the basal till, derived from the sedimentary rocks, is usually composed of sand, silt and clay in proportions that are about equal.

Marine Deposits

Marine deposits were set in place at the bottom or on the edge of postglacial seas fed by watercourses. The deposits found in deep water are generally argillaceous, while those in shallow water may contain silt, sand and even gravel.

Geotechnics

But geotechnics is an empirical field based on experience and observation. This characteristic is due in large part to the nature of the materials: the soil and rock. These materials' properties can vary significantly, even when found only a few tens of metres apart. In other words, soil is a heterogeneous material, as opposed to a homogeneous material, that is to say that its properties can vary within the same soil mass.

Because of the nature of soil and rock, laboratory tests as well as tests in the field are often used in geotechnics. The two types of tests—described in greater detail further on—help to develop a certain intuition. Subsequently, it is possible to determine whether soil is good for the production of compressed earth blocks, simply by sight and touch.

Collecting soil samples

I obtained the maps and I began studying them. I coloured certain areas on these maps in order to better understand the various surface deposits, to better orient myself and to decide where I would collect soil samples. Then I started collecting soil samples. At first, I thought that quarries operated by companies would be easily accessible. However, it didn't take long before I realized that there was gravel and sand, but no clay. Most of the time, I also found organic soil which must not be used in the production of compressed earth blocks.

For this project, where the excavation tools consisted of a shovel and a pick, it was important to find places that were easily accessible. Furthermore, earth cannot be collected from just anywhere or anyone. In the end, the best places to collect soil samples were housing construction sites. These sites are usually situated around urban centres. On these sites, the topsoil, which contains a lot of organic matter is usually removed.

So the first thing I had to do was to learn how to locate the type of soil I wanted to analyze, locate it accurately on the maps, locate the easily accessible areas once on site, ask permission from the person(s) concerned and dig to obtain one to two kilos of earth. It was also necessary to take into consideration the fact that, if the tests showed that the sample was suitable for the fabrication of the blocks, 0.5 m^3 of earth would have to be subsequently collected from the same place.

Simple Tests for Soil Identification

There are many simple tests that can be carried out in the field to identify earth. Here are the ones I performed before taking soil samples:

First of all, a visual examination. The dry earth is examined to gauge its sand fractions and its fines.

Then, the touch test. The biggest particles are removed, and the earth is held in one hand and handled, rubbed between the fingers and the palm of the hand. The earth is sandy if it is rough and presents no cohesion. The earth is silty if there is only a slight roughness and if the sample, when moistened, becomes moderately plastic. The earth is argillaceous if it is in clumps that resist crushing when dry and becomes plastic and sticky when wet.

Finally, sedimentation. It is possible to perform a simplified sedimentation test in the field. The material used is simple: a clear glass bottle, cylindrical with a flat bottom, with a capacity of at least one litre, with a cap. The bottle is filled one-quarter full with earth and the other threequarters are filled with clean water. Put the cap on and shake vigorously. The mixture is placed on a horizontal surface to settle. The sand will settle on the bottom; on top of the sand will be a layer of silt and on top of that, a layer of clay. The thickness of each layer is measured and a rough estimate of the percentage of each particle-size group can thus be calculated. It should be noted that clay may take several hours to settle down. When the clay settles down, the water contained in the bottle may give it unrealistic proportions if the clay swells when it comes in contact with water. Therefore, this method provides only an overview of the granulometry.

And so 13 soils samples were brought, in two trips, to the laboratories at the Université de Sherbrooke for analysis.

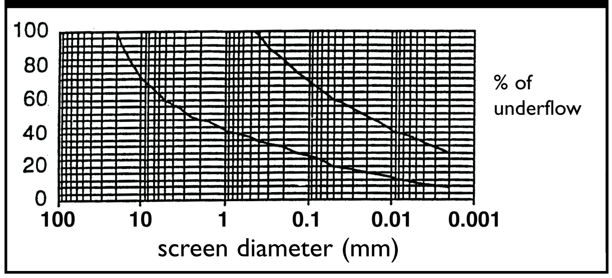
Three of these soils cannot be identified on the maps. Indeed, the maps do not cover the urban areas of Quebec. Two of these soils, namely the soil from Kahnawake and the soil from Laval, cannot be positioned on the maps. The third soil consists of mixed earth which was used to become more familiar with the press. The blocks which were thus made were taken to Professor Athienitis at Concordia University so that he could also familiarize himself with this material.

First, Mr. Lefebvre at the Université de Sherbrooke advised me to perform sieve and sedimentation analyses in order to, first of all, do a soil survey, hoping that among these samples would be the three soils desired to make the compressed earth blocks. But these tests slightly differed from the French tests. The Université de Sherbrooke thus had to perform the Atterberg limits and the methylene blue tests so that the ENTPE could form an opinion on which of the soils should be used in the production of the compressed earth blocks. Because of this trial and error approach, only one type of soil had been collected by the time Mr. Ali Mesbah from the ENTPE arrived in Montréal.

Sieve Analyses

Sieve analyses determine the respective quantity of each of the elements of which the soil is composed. A chart is then drawn, with the size of the particles on the abscissa and the percentage of the accumulated underflow on the ordinate. This is the grading curve. A good distribution of the different components optimizes each one's mechanical role: the gravel and the sand act as the skeleton while the clay ensures cohesion of the material. As well, when the soil is compacted, a good distribution will allow for a redistribution of the elements which will eliminate most of the gaps. CRATerre had determined the range for the compressed bricks (see Figure 1). It is then easy to determine whether the grading curves fall within that range. It should be noted that when a soil falls in line with these curves, it has a good chance of being used, but that is neither a necessary nor a sufficient indicator.

Figure 1: Range for Compressed Bricks



The soils that were chosen to make compressed earth blocks were from Kahnawake, Ste-Eustache and C-5s (Laval). Let's take a look at the grading curve of these soils. (see Appendix)

Kahnawake

This grading curve is spread out; that is, the curve shows that the soil from Kahnawake contains a little gravel (0.2), sand (30.1), silt (33.2) and finally, clay (36.5). If we take a look at the range for compressed bricks set by CRATerre, we see that the clay content in the soil from Kahnawake is at the upper limit, but the grading curve still falls within the range. The grading curve indicates that this soil is mostly composed of fines. Indeed, almost 70 per cent of this soil is composed of silt and clay.

Ste-Eustache

This grading curve is also spread out. The soil from Ste-Eustache contains gravel (11.1), sand (48.1), silt (31.8) and clay (9.0). If we take a look at the range set by CRATerre, we see that the clay content in the soil from Ste-Eustache is at the lower limit, but still within the range. The grading curve indicates that the soil is composed of 40 per cent fines and 60 per cent sands and gravels. The blocks made with this soil will have a good backbone but will be a little lacking in binders, since this soil is only 9 per cent clay.

Laval

Again, the grading curve is spread out. The soil from Laval contains gravel (8.8), sand (47.2), silt (30.0) and clay (14). The clay content is just about perfect. The fines account for 44 per cent of the material, slightly more than in the soil from Ste-Eustache.

Sedimentology

Sedimentology is part of the sieve study, but is done on material with a circumference < 100 µm. These fine elements require greater precision. This analysis uses the difference in falling velocity of soil particles in suspension in water. The bigger particles settle first and the finer particles last. The density variation is measured at regular intervals and at a given height. Knowing the falling velocity of particles depending on their size makes it possible to calculate the proportions of the various particle sizes. The sample used for this test must first be prepared using a deflocculating agent, which separates fine particles that are stuck together.

If the grading curve falls within the range, it can be concluded that the soil is suitable for the production of compressed earth blocks. But a curve which falls slightly outside of the range but is well spread out is better than a curve that spikes but still falls completely within the range. A good distribution of the various components will optimize each one's mechanical role. Moreover, during compaction, a good distribution will allow for a redistribution, which will eliminate most of the gaps.

Uniformity Coefficient

The lower the uniformity coefficient, the more uniform the soil is. According to Myriam Olivier, this value is not appropriate for earth construction. This uniformity coefficient applies to the study of concrete and road construction.

Atterberg Limits

Atterberg limits focus on the study of soil particles < 400 µm. The material's fine particles have physicochemical properties that vary depending on their mineralogical or chemical nature. The greater the plasticity index (ip) of the clay, the more active the clay contained in the material. If we take a look at the test results from the Université the Sherbrooke, we have a ip of 27.41 for the soil from Kahnawake, 8.08 for Ste-Eustache and 8.8 for Laval. The Atterberg limits confirm that the clays in the soil from Kahnawake are more than three times more active than those in the soils from Ste-Eustache and from Laval, which are about equal.

Methylene Blue Tests

Methylene blue tests measure the capacity of the clay in a soil to absorb methylene blue in the external and internal surfaces of the particles studied. This test characterizes the soil's capacity to stabilize the water, which will be proportional to its fixation of methylene blue. We have seen that in kaolinite, for example, there is a very strong bond between its sheets, which reduces its specific surface, since methylene blue has access only to the external surface of the crystal. This being said, the greater the specific surface, the more active the clays. The specific surface of the soil from Kahnawake is 59.13 m^2/g, 26.56 m^2/g for the soil from Laval and 15.34 m^2/g for the soil from Ste-Eustache.

Again, the tests on the soil from Kahnawake show a more active clay. The blue value (BV) is in relation to the specific surface.

Table 1: Soil Survey

Project: Earth Construction
Date received: 01-06-98

Identification	A-5s(1)	A-5s(2)	B 5s/5a	C-5a	C-5s	D-5a	E-5s	F(mtl)
Description	Fine sand with trace of silt	Fine, silty sand with traces of clay	Silt and sand with traces of clay	Silty and argilaceous sand	Silty sand, some clay, traces of gravel	Silty sand, traces of clay, some gravel	Silty clay, traces of sand	Medium-sized sand with some silt, traces of gravel and clay
	beige-brown	gray-beige	brown	brown	brown	brown	pale brown	brown-beige
				roots	roots	roots	roots	roots
Water content	3.19%	4.80%	15.63%	14.93%	8.90%	10.67%	27.49%	4.43%
Paricle-size distribution								
Gravel					8.8	10.5		2.5
Sand	97.6	68.8	35.9	43.1	47.2	52.4	6.7	79.4
Silt	2.4	25.2	57.1	32.9	30.0	30.1	35.3	14.1
Clay		6.0	7.0	24.0	14.0	7.0	58.0	4.0
Uniformity coeficient (d_{60}/d_{10})	1.75	3.57	22.00	>83.00	384,60	100.00	>2.30	55.56
W_L				32.3	27.5			
W_P				16.3	18.7			
ip				16.0	8.8			
BV				1.604	1.271			
Specific Surface				33.52 m^2/g	26.56 m^2/g			
Quantity received	15.0 kg	15.0 kg	15.0 kg	15.0 kg	15.0 kg	15.0 kg	15.0 kg	15.0 kg

Table 2: Soil Survey

Project: Earth Construction
Date received: 22-07-98

Identification	Kahnawake	Piedmont	Ste-Eustache	Saint-Colomban	Chalet
Description	Sand and silt and clay traces of gravel dark orange-brown organic matter	Argillaceous silt with some sand beige organic matter	Silty sand with some gravel and clay orange-brown organic matter	Silty sand with traces of clay brown	Silty sand with traces of gravel and clay dark brown good deal of organic matter
Water content	27.40%	24.04%	7.40%	19.66%	22.09%
Particle-size distribution					
Gravel	0.2		11.1		2.4
Sand	30.1	5.7	48.1	73.0	56.3
Silt	33.2	69.3	31.8	21.1	36.3
Clay	36.5	25.0	9.0	5.9	5.0
Uniformity coefficient (d_{60}/d_{10})	>17.7	>8.5	130.4	10.0	23.3
W_L	48.90		27.38		
W_P	21.49		19.30		
ip	27.41		8.08		
BV	2.829		0.734		
Specific Surface	59.13 m^2/g		15.34 m^2/g		
Quantity received	112.0 kg	112.0 kg	16.0 kg	16.0 kg	16.0 kg

Table 3: Soil selection for the Manufacture of Compressed Earth Blocks

Origin	Identification	% of cement	% of lime	% of clay < 2 µm
Kahnawake	KAN	5	0	36.5
Kahnawake	K	3	3	36.5
Laval	LAV	5	0	14
Laval	LV	0	0	14
Ste-Eustache	Ste	5	0	9

Soil Selection

When Mr. Mesbah arrived, with the results of the sieve analyses, the Atterberg limits, and the methylene blue tests in hand, we chose the three soils. The first came from Laval (the one that had already been collected) and had a perfect particle-size distribution to make compressed earth blocks. We decided to perform two tests with this soil. The first test consisted in making blocks without the use of a stabilizer, which we will call *LV*, and the second test batch contained 5 per cent cement as stabilizer, and we will call it *LAV*.

The second soil came from Ste-Eustache and contained only 9 per cent clay, the minimum amount of clay required for the production of compressed earth blocks. We decided to add 5 per cent cement to increase its cohesive capacity, as cement sets on sand. We will call this soil *Ste*.

Finally, the third soil came from Kahnawake. This soil contained 36.5 per cent clay, the maximum quantity allowed for the production of compressed earth blocks. We also decided to perform two tests with this soil. For the first test, 5 per cent cement was added to the soil (this soil is called *KAN*), and for the second test, 3 per cent lime and 3 per cent cement were added to the soil (this soil is called *K*).

Compaction

Compaction of a soil prevents water circulation and limits the relative movement of the particles by increasing internal cohesion. Compaction can be improved by chemically stabilizing the soil through the addition of binders, such as cement and lime. The aim is to either create additional artificial and stable bonds between the soil particles, create an electrical balance so that water molecules cannot stick to—or even penetrate—the particles, or reduce rubbing between particles, thus allowing for better placing of the particles during compaction, resulting in a greater dry density.

Stabilization

Cement is a hydraulic binder, which means that it sets when it comes in contact with water. Cement works well in tandem with sands. When cement is hydrated by the water in the soil, it turns into crystals, stable over time and water resistant, that bond with the soil particles. This reaction is effective as long as the cement particles find enough water to properly hydrate.

Lime involves two reactions in the soil. In the presence of air, it oxidizes and forms calcium carbonate crystals ($CaCO_3$), generally not very resistant. In an anaerobic environment, the lime attacks the clay and forms crystals that are much more solid. This reaction, very slow (spanning several months), creates very solid bonds by disorganizing the inside of the sheets and recreating other, much more stable bonds between the particles. This reaction is even more effective as the clay's original structure is disorganized, loose and only slightly crystallized, which explains montmorillonite's capacity to be processed with lime.

Slaked lime modifies the soil's pH and causes clay to flocculize as a reaction to cation exchanges. This reaction is very rapid (a few minutes). A very argillaceous material processed in this way is much easier to use and can be immediately compacted. Subsequently, the crystallization reaction may take place.

Soil Collection

Soil collection was done in a very rudimentary way. I had calculated that the soil needed to make the required 20 blocks for each test group at Concordia University would fit in my car. Plastic bags, each one containing the earth needed for one block, allowed me to distribute the weight in my car and to bring this soil to my garage, where the compressed earth blocks were to be made. The earth was taken at a depth of 30 cm to avoid the organic earth, and rocks were removed before the earth was bagged.

Mr. Mesbah and I had to return to Laval to collect an amount of earth equivalent to 20 blocks of compressed earth. We also went to Ste-Eustache and Kahnawake to collect soil. Kahnawake was the only place where we needed a truck. We collected the equivalent of 40 blocks of soil. There were four people on our team.

Optimizing the Density of Compressed Earth Blocks

Now that we had our soil, we had to optimize the density of the blocks. The density of the blocks is measured by the weight of the earth, volume and water content. You will find below the tables for each soil. These tables show that in Laval, the water content necessary to obtain the best density of a block made with this soil was 13.5% with a weight of 12,480 g and a dry density of 1.962 kg/m^3. For the soil from Ste-Eustache, water content was 11.8 per cent with a weight of 12,300 g and a dry density of 1.942 kg/m^3. For the soil from Kahnawake, water content was 16 per cent with a weight of 11,800 g and a dry density of 1.777 kg/m^3. We see that the more clay contained in a soil, the higher the water content and the lower the density. A scale on loan from the Université de Sherbrooke allowed us to make all these calculations.

Table 4: Laval, Water Content and Dry Density Calculation							
W (%)	W1	W2	W3	W4	W5	W6	
calculation							
weight of the earth	302	302	282.2	1	1	1	
total wet weight	521.5	540.2	502.5	2	2	2	
total dry weight	493.5	513.5	477.4	3	3	3	
water content	14.6214099	12.62411348	12.85860656	-50	-50	-50	
block density calculation							
block weight (g)	height (cm)	water content	dry density				
11,170	9.3	11.5	1.826				
11,745	10	11.5	1.785				
11,400	9.45	11.5	1.834				
10,980	9.3	12.6	1.777				
11,280	9.3	12.6	1.826				
11,520	9.45	12.6	1.835				
11,360	9.4	12.6	1.819				
11,970	9.4	12.6	1.917				
12,370	9.9	12.6	1.881				
12,160	9.5	12.6	1.927				
11,600	9.3	13.5	1.863				
11,880	9.45	13.5	1.877		Gd	Rc (kPa)	shrinkage (dv/v)
12,100	9.4	13.5	1.922	9.8	1.715	620	2
12,300	9.5	13.5	1.933	11.8	1.790	1,220	2.5
12,480	9.5	13.5	1.962	13.8	1.858	1,890	3.5
11,830	9.8	12	1.827	16	1.840	1,510	6.2
11,780	9.6	12	1.857	17.8	1.782	1,700	8.1
12,230	9.6	14	1.894				
12,130	9.65	14	1.869				
12,050	9.65	15	1.860				
12,210	9.65	15	1.865				

Table 5: Ste-Eustache, Water Content and Dry Density Calculation							
W (%)	W1	W2	W3	W4	W5	W6	
calculation							
weight of the earth	1	112.5	1	1	1	1	
total wet weight	2	346	2	2	2	2	
total dry weight	3	325	3	3	3	3	
water content	-50	9.882352941	-50	-50	-50	-50	
block density calculation							
block weight (g)	height (cm)	water content	dry density				
10,900	9.6	8.8	1.769				
11,100	9.6	8.8	1.801				
11,300	9.6	8.8	1.834				
11,500	9.7	8.8	1.847				
11,690	10	8.8	1.821				
11,500	9.6	9.88	1.848				
11,700	9.6	9.88	1.880				
11,900	9.6	9.88	1.912				
12,100	9.65	9.88	1.934				
12,300	10	9.88	1.897				
12,100	9.5	11.8	1.931		Gd	Rc (kPa)	shrinkage (dv/v)
12,300	9.6	11.8	1.942	10.9	1.655	995	1.9
12,500	9.8	11.8	1.934	12.7	1.705	1,800	2
12,700	10	11.8	1.925	15.1	1.721	2,400	2.4
				16.75	1.758	1,920	5
				18.8	1.722	2,390	8

Table 6: Kahnawake, Water Content and Dry Density Calculation						
W (%)	W1		W3		W2	W6
calculation						
weight of the earth	302		282.2		302	1
total wet weight	531.3		512.7		539.2	2
total dry weight	499.6		482.6		504.7	3
water content	16.04251012		15.01996008		17.0202269	-50
block density calculation						
block weight (g)	height (cm)	water content	dry density			
10,600	9.6	16	1.613			
10,200	9.6	16	1.552			
10,800	9.6	16	1.644			
11,000	9.6	16	1.674			
11,200	9.6	16	1.705			
11,400	9.6	16	1.735			
11,600	9.65	16	1.756			
11,800	9.7	16	1.777			
10,800	9.6	17	1.63			
11,200	9.6	17	1.69			
11,060	9.84	17	1.628			
11,600	9.7	17	1.732			
10,800	9.7	15	1.641	12.3		
10,900	9.7	15	1.656	14.1		
11,000	9.7	15	1.671	16		
11,100	9.7	15	1.687	18.3		
11,200	9.7	15	1.702	20		
11,300	9.7	15	1.717			
11,500	9.7	15	1.747			
11,600	9.9	15	1.727			
11,900	impossible	16				

Production

The only remaining task was to make the compressed earth blocks. At first, these blocks were to have been made at the Université de Sherbrooke. We would have had to move the press and the earth and find lodging and food for the entire time needed to calculate the optimal density, prepare the earth and make the blocks. Then we would have had to move the blocks and the press.

My garage turned out to be a good laboratory. Working there also allowed us to invite people interested in the *earth material*. This way, we always had help. As Mr. Mesbah is a professor at the ENTPE, these three meeting days were, for those who were there, a learning opportunity. The people present at these meetings were Mr. André Fauteux, editor-in-chief, la *Maison du 21e siècle*; Mr. André Bourassa, architect; Ms. Micheline Gaudreau, architect; Mr. Miloud Boukhira, architect; Ms. Assya Bendeddouch, architect; Ms. Angeline Spino, architect; Mr. Pierre Duquet, contractor; Mr. Pierre Gauvreau; Mr. Robert Thériault; Mr. Jean-Marie Alepins and Mr. Jocelyn Gagné.

Preparing the earth consists of passing it through a sieve, spraying water into it to achieve the required water content and adding the stabilizers, as mentioned above. Because these blocks were to be tested in the laboratories at Concordia University, it was important that each and every block in one group be identical. The amount of earth for each block was therefore calculated according to the calculation for optimizing their density.

It was very easy to make the LAV and LV blocks, and not quite as easy to remove the LV blocks from the moulds as they contained no binder. Because of that, they had to be laid down very gently, so as not to damage the corners. It was the same with the Ste blocks, which contained very little clay. The blocks made with the soil from Kahnawake were harder to compress, because the high clay content created a suction that slowed down compression as well as removal from the moulds. However, after being removed from the moulds, these blocks were already very solid and did not require so much care in handling. A little sand could easily have been added to this soil, which would have rendered compaction easier.

Curing and Drying

The blocks were placed on wood pallets and plastic was placed around those that contained cement and needed curing. The only ones that did not need plastic placed around them were those made with the soil from Laval, to which no stabilizer was added.

Two weeks after the blocks were made, the plastic was removed. Each block was weighed and identified before drying. In October they were transported to Concordia University to undergo mechanical and thermal testing.

Tests Performed at Concordia University

Table 7: Summary of the Tests Performed						
TEST	**UNITS**	**KAN**	**K**	**LAV**	**LV**	**Ste**
Density	kg/m^3	1897	1833	2040	1991	2,040
Conductivity	W/m°C	0.48	0.41	0.53	0.73	0.5
Thermal resistance	m^2°C/W	0.20	0.23	0.18	0.13	0.19
Specific heat	J/kg K	830	830	830	830	830
Freeze-thaw	–	pass	pass	pass	fail	pass
Permeability	ng/(s.m.Pa)	39.9	40.9	27.1	43.4	27.3
Water absorption	%	19.4	20.4	11.2	fail	13.6
Compression resistance (1/2 block)	Mpa	3.48	3.63	3.63	2.10	3.84
Compression resistance (prisms)	Mpa	2.38	2.12	2.52	1.49	3.63

Thermal Tests

The thermal tests performed on the blocks at Concordia University were conductivity, thermal resistance and specific heat.

Conductivity and Thermal Resistance

Conductivity is the ability of a material to allow heat to pass through it. The greater the conductivity, the more conductive the material, and thus the lesser the material's thermal resistance.

In the conductivity tests carried out at Concordia University, K, with 3 per cent lime and 3 per cent cement, had the lowest conductivity, 0.41 W/m°C, thus better thermal resistance, 0.23 m^2°C/W. It's enough to make me believe that lime increased its thermal resistance. Indeed KAN, with soil from the same place and to which only cement was added, had lower thermal resistance. LV had the highest conductivity, 0.73 W/m°C and the lowest thermal resistance, 0.13 m^2°C/W. In fact, LV's thermal resistance was 57 per cent lower than K's. Nothing was added to this soil. If we compare it to LAV, which was made from the same soil but to which cement was added, we see that the addition of cement increased its thermal resistance. Therefore the addition of cement alone or a mix of cement and lime affects thermal resistance. As for the Ste, LAV and KAN soils, to which cement was added, they had about the same thermal resistance, 0.18 m^2°C/W for LAV, 0.19 m^2°C/W for Ste and 0.20 m^2°C/W for KAN.

The higher the density of a material, the closer the molecules, the more will one molecule's agitation be transmitted to others, and thus the higher the conductivity of the material. K's density is the lowest, 1,833.51 kg/m^3. It is therefore not surprising that K had the lowest conductivity. KAN also had low density and low conductivity. However, LV did not have the highest density (1991.44 kg/m^3), but it had the highest conductivity. This result is probably due to the fact that nothing was added to LV in comparison with the other blocks.

Specific Heat

Specific heat is a material's ability to store heat and to release it when heat production ceases. As expected, the specific heat (per kg) is approximately the same for all blocks. However, the heat capacity which is the product of specific heat and density, is higher for the densier materials which store more heat per unit temperature.

Mechanical Tests

Compression

Two methods were used for the compression tests. The first was the ASTM C 67 method and the second was ENTPE's method: "Proposal of a standard for strength tests on compressed earth blocks." The first method uses half-blocks and corresponds to the tests done on very rigid blocks (concrete or terra-cotta), and the other method uses prisms, the results of which are identical to those obtained on cylinders of compacted earth. The French method yielded a lower compression resistance.

In the manufacture of compressed earth blocks, the mechanical behaviour of a soil is not directly related to its density. In fact, K, which had the lowest density (1,833 kg/m^3) had very good compression resistance (3.63 Mpa).

Adding cement and lime has a significant impact on compression resistance. Indeed, the compression resistance of LV, the soil to which nothing was added, is much lower.

Ste showed the best compression resistance. The significant friction between sand particles which counter their internal movements would explain Ste's good performance.

Water Content Tests

The mechanical tests also include water content tests. Let's take a look at permeability, water absorption and freeze-thaw.

Permeability

Permeability measures the amount of water vapour that can pass through a block. LV has the highest permeability, 43.3 ng/(s.m.Pa), closely followed by K, 40.9 ng/(s.m.Pa) and by KAN, 39.9 ng/(s.m.Pa). Water vapour can circulate freely only through the pores or gaps between particles.

If we compare LV and LAV, two categories of blocks made from the same soil, we can see that cement fills the pores and gaps. Indeed, LAV, to which cement was added, is 62 per cent less permeable than LV.

Compaction also reduces permeability, because the number of gaps decreases and the dry material's mass density increases. That is why KAN and K, which had lower density, were highly permeable, and why LAV and Ste, which had a higher density, had low permeability.

Water Absorption

The water absorption tests were performed on blocks that had been dried, cooled and weighed. They were then submerged in water at a temperature ranging between 15.5°C and 30°C for 24 hours. After that they were wiped off and weighed again.

The results of these tests are comparable to the results of the permeability test. Indeed, those that were more permeable, such as K and KAN, also absorbed a greater quantity of water. It should be noted that LV, to which nothing was added, could not pass this test. Therefore a block that has not been stabilized is very vulnerable to water in its liquid state. However, in vapour state, water has no effect on the block's resistance, stabilized or not.

Freeze-thaw

It is therefore not surprising that LV could not pass the freeze-thaw test either, while all the others did. First the test was done in 100 cycles of six hours with a temperature varying between -6ºC and 26ºC. A second test was done in 50 cycles of six hours with a temperature varying between -19ºC and 27ºC. Please remember that this material has not been fired.

Wall Simulations Using "Empty" Software (see Appendix)

The exterior temperature used for this simulation is that of Montréal. The heat accumulated in the material's mass gives off a passive radiant heat when this heat is released. Radiant heat warms objects and humans, not just the air. For this reason, the temperature inside raw adobe housing can be lower, between 18°C and 21°C. The relative humidity in raw adobe housing is always constant and does not go very low because of its hygroscopicity. Here are the interior temperatures and relative humidity used in this simulation.

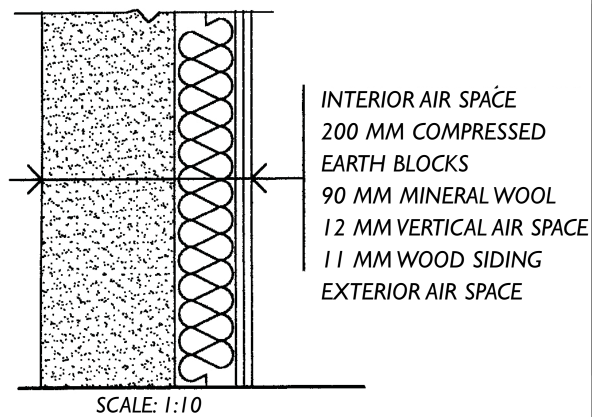
	Interior temperature	Relative humidity
January	21°C	20%
February	21°C	20%
March	21°C	20%
April	21°C	21%
May	21°C	34%
June	23°C	51%
July	23°C	61%
August	23°C	58%
September	21°C	46%
October	21°C	31%
November	21°C	21%
December	20°C	20%

The *earth material's* great strength is its thermal mass, not its thermal resistance. To meet Code standards, the compressed earth block wall would have to be insulated. This wall's composition would thus be as follows:

KAN-1 Wall

If we only look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leak area and no overlap of pressure difference as analysis data (Table 8), we see no condensation *in the mineral wool* in the first or second year. This insulating material will retain its insulating properties.

Figure 2: Cross-section 1 of a Wall made with Compressed Earth Blocks



If we look at the internal diffusion of this wall again, using the same analysis data, we see condensation *in the vertical air space* that disappears in April and in May (Table 9). However, evaporation is always greater than condensation. Therefore there is no accumulation. Indeed, in the second year, there is the same condensation in June as there is in June the first year. Keep in mind that this software simulates the most severe conditions and does not take into consideration the ventilation present in this air space.

If we look at the internal diffusion of this wall yet again, still using the same analysis data, we see condensation *in the wood siding* that disappears in April (Table 10). However, evaporation is always greater than condensation. Therefore there is no accumulation. Indeed, in the second year, there is the same condensation in June as there is in June the first year.

There is very little chance of any air leaking through this wall made of blocks 200 mm thick, except if the joints are damaged. But suppose that a joint was damaged. If we simulate this wall with a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference, we see no condensation in *the mineral wool* either in the first or second year (Table 11).

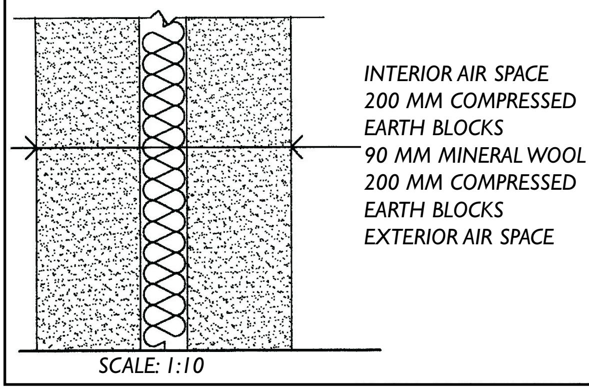
If we simulate this wall with the same analysis data, we see condensation in the *vertical air space* every month except April (Table 12). Evaporation is greater than condensation, except for January when 0.0003 kg/m^2 of water will drain. This very small amount of condensation might change to ice in January, when there are 466 hours of temperatures below freezing. There is, however, no accumulation, since condensation in June the second year is the same as in June the first year. Keep in mind that this software simulates the most severe conditions and does not take into consideration the ventilation present in this air space.

With the analysis data, we see condensation in *the wood siding* every month except April (Table 13). In January, the wood absorbs 0.3912 kg/m^2 of water and in February, 0.6787 kg/m^2 of water. Although wood has an absorption capacity of 1.6 kg/m^2, and although this siding will dry in March and April, there is still risk of the wood being damaged in January and February. But this condensation comes from the condensation in the vertical air space. Here again, keep in mind that the software simulates the most severe conditions and does not take into consideration the ventilation present in this air space.

We can suggest that a wall made of compressed earth blocks and built this way would fare very well through our Canadian winters. The earth blocks make up the structure and provide the interior finish. In this way they retain this material's properties, including its thermal mass and hygroscopicity.

KAN-2 Wall

Figure 3 : Cross-section 2 of a Wall made with Compressed Earth Blocks



If we use two compressed earth blocks, separated by 90 mm mineral wool, and if we only look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leakage area and no overlap of pressure difference as analysis data, we see no condensation *in the mineral wool* in the first or second year (Table 14). This mineral wool will therefore retain, without problem, its insulating properties.

If we look at the internal diffusion of this wall, using the same analysis data, we see a small amount of condensation *in the exterior compressed earth blocks* in July, August, September, December, January, February and March (Table 15). However, evaporation is always greater than the condensation and there is no accumulation.

If we look at the internal diffusion of this wall, using the same analysis data, we see no data for *the exterior air space*. Indeed, the computer cannot give me an answer. Actually, I get zeros everywhere (Table 16).

There is very little chance of any air leaking through this wall made of blocks 200 mm thick, except if the joints are damaged. But suppose that a joint was damaged. If we simulate this wall with a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference, we see no condensation in *the mineral wool* either in the first or second year (Table 17).

If we simulate this wall with the same analysis data, we see condensation *in the exterior compressed* earth blocks for all the months except April (Table 18). Evaporation is greater than condensation, except for January and February. There is no accumulation since the second year is the same as the first. There are, during these two months, 892 hours (466 + 426) hours of temperatures below freezing. We could deduce from this that there is a risk of this material deteriorating during these two months. But the condensation absorbed is not great, only 0.1917 kg/m^2, and this material's absorption capacity is very high: 63.5 kg/m^2. If the compressed earth blocks are well stabilized, a wall made of these blocks could withstand our winters very well.

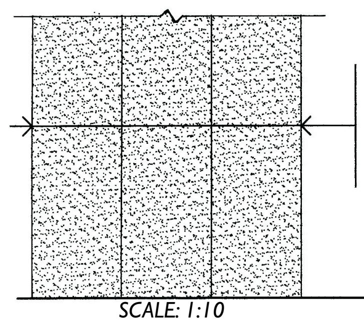
If we simulate this wall with the same analysis data, we see condensation *in the exterior air space* every month except April (Table 19). However, evaporation is always greater than condensation and there is no accumulation in the second year.

This type of wall could go through our winters just as well. The exterior blocks would have to be well stabilized and protected with earth parging that is a little better stabilized than the blocks.

KAN-3 Wall

The walls made of earth built in all countries of the world are thick walls. Let's take a look at how this monolithic wall would react in our climate. This wall's composition is as follows:

Figure 4: Cross-section 3 of a Wall made of Compressed Earth Blocks



If we look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leakage area and no overlap of pressure difference as analysis data, we see no condensation in *the exterior compressed earth blocks* in the first or second year (Table 20). Therefore there is no risk of this wall being damaged during our rigorous winters.

If we look at the internal diffusion of this wall again, using the same analysis data, we see no condensation *in the exterior air space* in the first or second year (Table 21). This wall will not be damaged during our rigorous winters.

If we simulate this wall, using a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference as analysis data, we see no condensation in the *exterior compressed earth blocks* in July, October, November, April or May (Table 22). However, in the months where there is condensation, evaporation is always greater than the condensation. These exterior compressed earth blocks will have to be better stabilized, using cement or lime, than the interior compressed earth blocks.

If we simulate this wall using the same analysis data, we see condensation *in the exterior air space* every month except April (Table 23). However, evaporation is always greater than the condensation.

This wall would also fare very well through our winters. It would, however, need to be protected with earth parging that is a little better stabilized than the compressed earth blocks.

Let's look now at these same walls made with LAV.

LAV-1 Wall
(see Figure 2)

If we only look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leakage area and no overlap of pressure difference as analysis data (Table 24), we see no condensation *in the mineral wool* in the first or second year. This insulation will retain its insulating properties.

If we look at the internal diffusion of this wall again, using the same analysis data, we see condensation *in the vertical air space* that disappears in April and in May (Table 25). However, evaporation is always greater than the condensation. Therefore there is no accumulation. Indeed, in the second year, there is the same condensation in June as there is in June the preceding year. Keep in mind that this software simulates the severest conditions and does not take into consideration the ventilation present in this air space.

If we look at the internal diffusion of this wall yet again, using the same analysis data, we see condensation *in the wood siding* that disappears in April (Table 26). However, evaporation is always greater than the condensation. Therefore there is no accumulation. Indeed, in the second year, there is the same condensation in June as there is in June the preceding year.

There is very little chance of any air leaking through this wall made of blocks 200 mm thick, except if the joints are damaged. But suppose that a joint was damaged. If we simulate this wall with a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference, we see no condensation in *the mineral wool* either in the first or second year (Table 27).

If we simulate this wall with the same analysis data, we see condensation in the *vertical air space* for all the months except April (Table 28). However, evaporation is always greater than the condensation. There is no accumulation, since condensation in June the second year is the same as in June the preceding year.

With the same analysis data, we see condensation in *the wood siding* every month except April (Table 29). In January, the wood absorbs 0.3811 kg/m^2 of water and in February, 0.6606 kg/m^2 of water. Although wood has an absorption capacity of 1.6 kg/m^2, and although this siding will dry in March and April, there is still risk of the wood being damaged in January and February. This condensation comes from the condensation in the vertical air space. Here again, keep in mind that the software simulates the most severe conditions and does not take into consideration the ventilation present in this air space.

We can suggest that a wall made of compressed earth blocks and built this way would fare very well through our Canadian winters.

LAV-2 Wall
(see Figure 3)

If we only look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leakage area and no overlap of pressure difference as analysis data, we see no condensation *in the mineral wool* in the first or second year (Table 30). This mineral wool will therefore retain its insulating properties, without problem.

If we look at the internal diffusion of this wall, using the same analysis data, we see a small amount of condensation *in the exterior compressed earth blocks* in June, August, September, December, January, February and March (Table 31). However, evaporation is always greater than the condensation and there is no accumulation.

If we look at the internal diffusion of this wall, using the same analysis data, we see no data for *the exterior air space* (Table 32). Indeed, the computer cannot give me an answer. Actually, I get zeros everywhere.

There is very little chance of any air leaking through this wall made of blocks 200 mm thick, except if the joints are damaged. But suppose that a joint was damaged. If we simulate this wall with a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference, we see no condensation in *the mineral wool* either in the first or second year (Table 33).

If we simulate this wall with the same analysis data, we see condensation *in the exterior compressed earth blocks* every month except April (Table 34). Evaporation is greater than condensation, except for January and February. There is no accumulation since the second year is the same as the first. There are during these two months 1,038 hours (547 + 491) hours of temperatures below freezing. We could deduce from this that there is a risk of this material deteriorating during these two months. But the condensation absorbed is negligible, only 0.3338 kg/m^2, and this material's absorption capacity is very high: 43.45 kg/m^2. If the compressed earth blocks are well stabilized, a wall made of these blocks could resist our winters well.

If we simulate this wall with the same analysis data, we see condensation *in the exterior air space* every month except April (Table 35). However, evaporation is always greater than condensation and there is no accumulation in the second year.

This type of wall could survive our winters just as well. The exterior blocks would have to be well stabilized and protected with earth parging that is a little more stabilized than the blocks.

LAV-3 Wall
(see Figure 4)

If we look at the internal diffusion of this wall, giving it 0 cm^2/m^2 of leakage area and no overlap of pressure difference as analysis data, we see no condensation in *the exterior compressed earth blocks* in the first or second year (Table 36). Therefore there is no risk of this wall being damaged during our rigorous winters.

If we look at the internal diffusion of this wall again, still using the same analysis data, we see no condensation *in the exterior air space* in the first or second year (Table 37). This wall will not be damaged during our rigorous winters.

If we simulate this wall, using a 1 cm^2/m^2 leakage area and a 5 Pa overlap of pressure difference as analysis data, we see no condensation in the *exterior compressed earth blocks* in July, October, November, April and May (Table 38). In the months where there is condensation, evaporation is always greater than condensation. These exterior compressed earth blocks will have to be better stabilized, using cement and/or lime, than the interior compressed earth blocks.

If we simulate this wall using the same analysis data, we see condensation *in the exterior air space* every month except April (Table 39). However, evaporation is always greater than condensation.

This wall would also fare very well through our winters. It would however need to be protected with earth parging that is a little more stabilized than the compressed earth blocks.

All in all, the results obtained from the simulation of the KAN and LAV walls are very similar, and it was deemed unnecessary to simulate walls made with the three other groups of blocks.

Conclusion

The soils around Montréal are by and large suitable for the production of compressed earth blocks. Keep in mind that my first concern when collecting the soil samples was to familiarize myself with the soils. I was convinced that among these samples would be three soils suitable for the production of compressed earth blocks.

Sieve Analyses of Other Soil Samples

Let's look at the other sieve analyses (in the Apendix): A-5s (1) contains no clay. It is composed almost solely of sand. This soil is therefore not suitable for the production of raw blocks. Also, its grading curve is not very spread out. According to Myriam Olivier, it is very difficult to correct soil by adding clay, but easy to do so adding sand and gravel.

A-5s (2) only contains six per cent clay. Its grading curve is more spread out than that of the preceding one. In order to better spread its grading curve, if we were to add coarse sand and gravel the percentage of clay would be decreased. Consequently, this soil is hardly recoverable.

B 5s/5a could be saved by adding coarse sand and some gravel.

C-5a could be corrected with coarse sand and gravel to flatten its grading curve.

C-5s is the soil from Laval that we used and whose grading curve is perfect.

D-5a has a nicely spread-out grading curve. A little cement would have had to be added to compensate for the low clay content.

E-5s contains too much clay at 58 per cent. Sand and gravel could of course be added, but it is very difficult to work with very argillaceous soils in the production of raw blocks. This soil is, however, very good for straw earth construction. But straw earth is not the subject of this research project.

F (mtl) contains very little clay. But it was important for me to test soil from Montréal.

Soil from Kahnawake was also chosen for this research project. As previously mentioned, sand could have been added to this soil.

Soil from Piedmont, with 25 per cent clay, could be corrected by adding sand and gravel.

Soil from Ste-Eustache was also chosen for this research project.

The soil from Saint-Colomban contains very little clay (5.9). However, it contains more clay than the next soil, i.e. Chalet, with which we made very good blocks. This soil contains a lot of sand (73.0), but it is very fine. The soil could have been corrected by adding coarse sand, flattening its grading curve a little more, and a little more cement to compensate for its low clay content.

Finally, the Chalet soil was used, as previously mentioned, to make compressed earth blocks, and to familiarize ourselves with this material. Even if this soil contains only five per cent clay, it was very easy to make very good blocks with it by adding seven per cent cement.

Finally, out of 13 soil samples, only a few were inadequate for the manufacture of compressed earth blocks.

If the soil taken right at the construction site is inadequate and cannot be amended, it is often possible to find soil nearby that has to be excavated for another project. It is then easy to have this soil delivered to the construction site instead of transporting it to a quarry.

The Advantages of Compressed Earth Blocks

From an environmental point of view

- The *earth material* requires very little energy to extract, transform, produce and transport since the soil is taken from the construction site itself or nearby. It does not pollute water, air or land.
- It protects the forest: compressed earth blocks form the building's structure and do not require a woodframe.
- It emits neither formaldehyde nor other pollutants. It sheds no fibres, but because it breathes, it filters exterior pollutants.
- When this material's useful life is over, it simply returns to the earth, from which it came.

From a technical point of view

- This material's great quality is its thermal mass, not its thermal resistance. However, the Code does not take this thermal mass into consideration. In order to meet the Code's standards, a wall made with compressed earth blocks has to be insulated on the outside. In this way, the heat accumulated in the walls will not easily dissipate outside and will be released inside. This great thermal mass makes this the material of choice for solar energy.
- Heat stored in these walls radiates inside. This passive radiant heat is the best heating system there is. Indeed, the radiation from these walls warms human beings and objects, not the air. A much lower temperature is required to achieve thermal comfort. In addition to being economical, these walls are healthier and more comfortable. According to Professor Athienitis, from Concordia University, the LV blocks, which received no stabilizer, have a thermal mass that is almost double that of concrete and a 24-hour cycle. The heat accumulated during the day will therefore be released during the night, thereby eliminating the need to heat during this time.
- This material's other great quality is its hygroscopicity. Hygroscopicity is linked to the presence of clay, which captures water vapour molecules. The humidity generated in a dwelling is thus absorbed by this material and is released when humidity levels fall, thereby continuously balancing the relative humidity inside the dwelling. Hygroscopicity therefore prevents the formation of fungi, which are very harmful to the health of the occupants. The thermal mass related to the hygroscopicity of this material make an earth dwelling a cool place during the summer, thereby eliminating the need for an air conditioner.
- Its permeability, 35.7 ng/(s.m.Pa) on average, is quite high when compared to concrete (1:2:4), which has a permeability of 4.7 ng/(s.m.Pa). This high permeability suggests that this material breathes. Indeed, the gaps and pores within this material allow water vapour to escape but also allow air to pass through. The cold air from outside slowly warms up when it comes in contact with the hot air from inside. The wall acts as a natural heat exchanger.
- If this material is used inside a dwelling, thus maintaining its thermal mass and hygroscopicity, it will not come into contact with water. In this case, even LV, to which nothing was added and which failed the freeze-thaw and water absorption tests, but which, according to Professor Athienitis, has the best “thermal mass”, could be used.
- The freeze-thaw and water absorption tests show that this material could also be used

outside when it has been stabilized. In this case, it could be finished with earth parging that is a little better stabilized than the wall or with a lime and sand-based coating.

- The compression resistance is sufficient for a two-storey dwelling, even for LV, which has the lowest compression resistance.
- This material provides good acoustic qualities.
- It is fireproof.
- It is very durable, since the clay of which it is made is at the last stage of its evolution—from mother rock, to gravel, to sand, to silt and finally to clay—making this material very stable. If quality blocks are used and the dwelling is well built, it will be there forever, as evidenced by the Great Wall of China.
- Compressed earth block wall construction uses a building technique known to all: masonry.
- Such constructions require little maintenance. In fact, maintenance can be reduced with a special architectural design.

From a wellness point of view

- The *earth material* creates housing that offers comfortable temperatures, warm in winter and cool in summer.
- It is very healthy since earth, according to David Pearson, has the same electromagnetic properties as human beings.
- A synergy is created between humans and their environment. Humans "live in" the earth.
- These thick walls offer great security.
- Lastly, I do not know of any "modern" building materials that have all these qualities.

"Earth is a gift from God to all nations," states Cointeraux. Rest assured, the proof is in! Structures out of earth have been built, and continue to be built in very cold places such as northern Russia, in certain Scandinavian countries, as well as in India (Himalayas) and southern China. Climatic conditions have little effect on this material that, if adapted to the existing conditions and well protected, can withstand the test of time. In order to last, say the English, an earth house needs "good boots" and a "good hat," in other words, a solid foundation and a good roof.

In light of the many advantages offered by the *earth material*, ecologically, technically and architecturally, and in light of the positive experience earth construction has given rise to elsewhere around the world, Canada should plan to pursue research, to contribute to the universal desire to renew this millennial know-how. Couldn't all the earth excavated here to prevent foundations from freezing be put to good use?

Earth architecture is no panacea, but it does offer a solution to some of the economic, social and cultural issues of our time.

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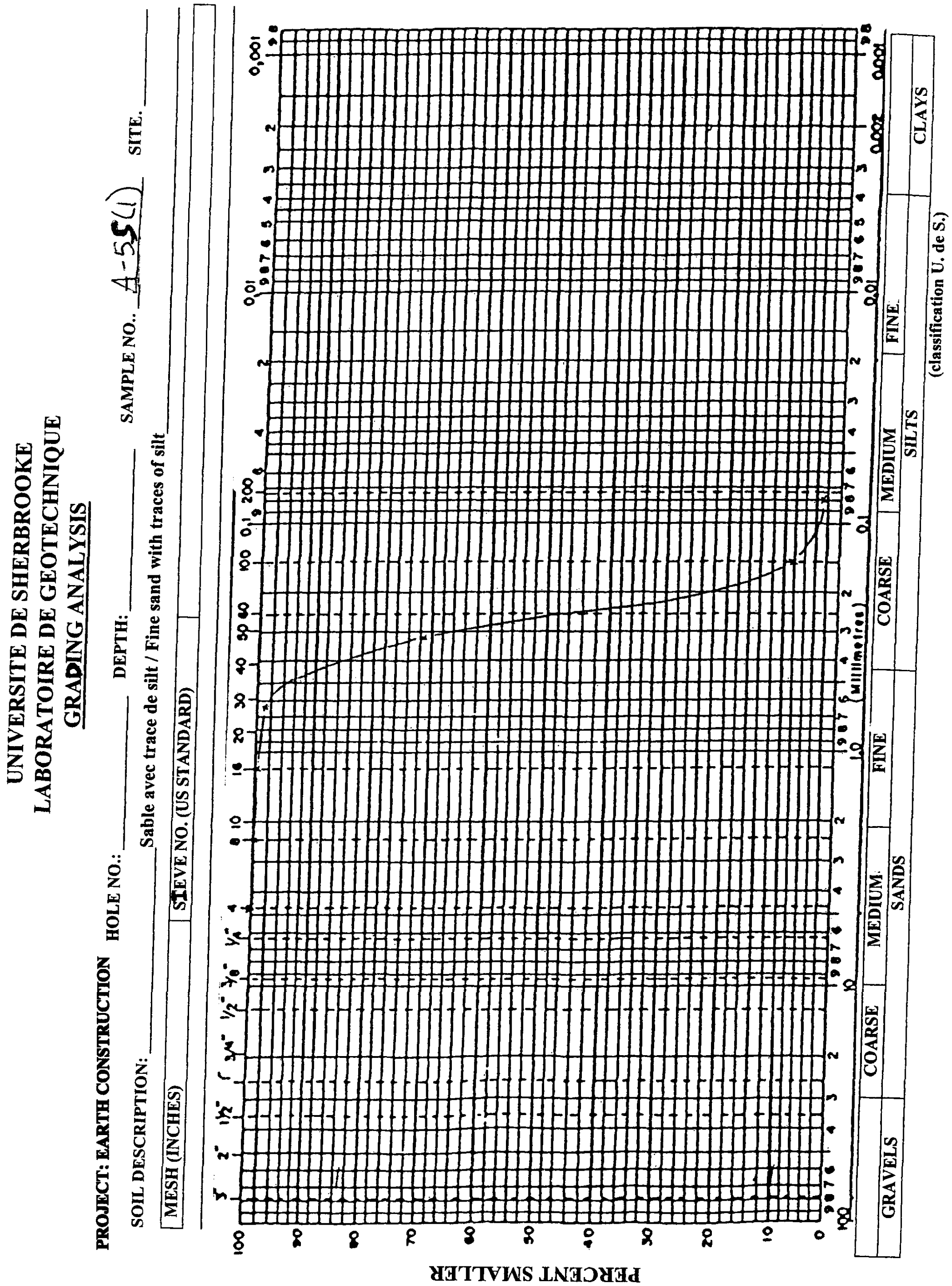
Appendices:

The Grading Curves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LABORATOIRE DE GEOTECHNIQUE
GRADING ANALYSIS
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DEPTH:
SAMPLE NO.. A-5(1)
SITE.
SOIL DESCRIPTION: Sable avec trace de silt / Fine sand with traces of silt
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)

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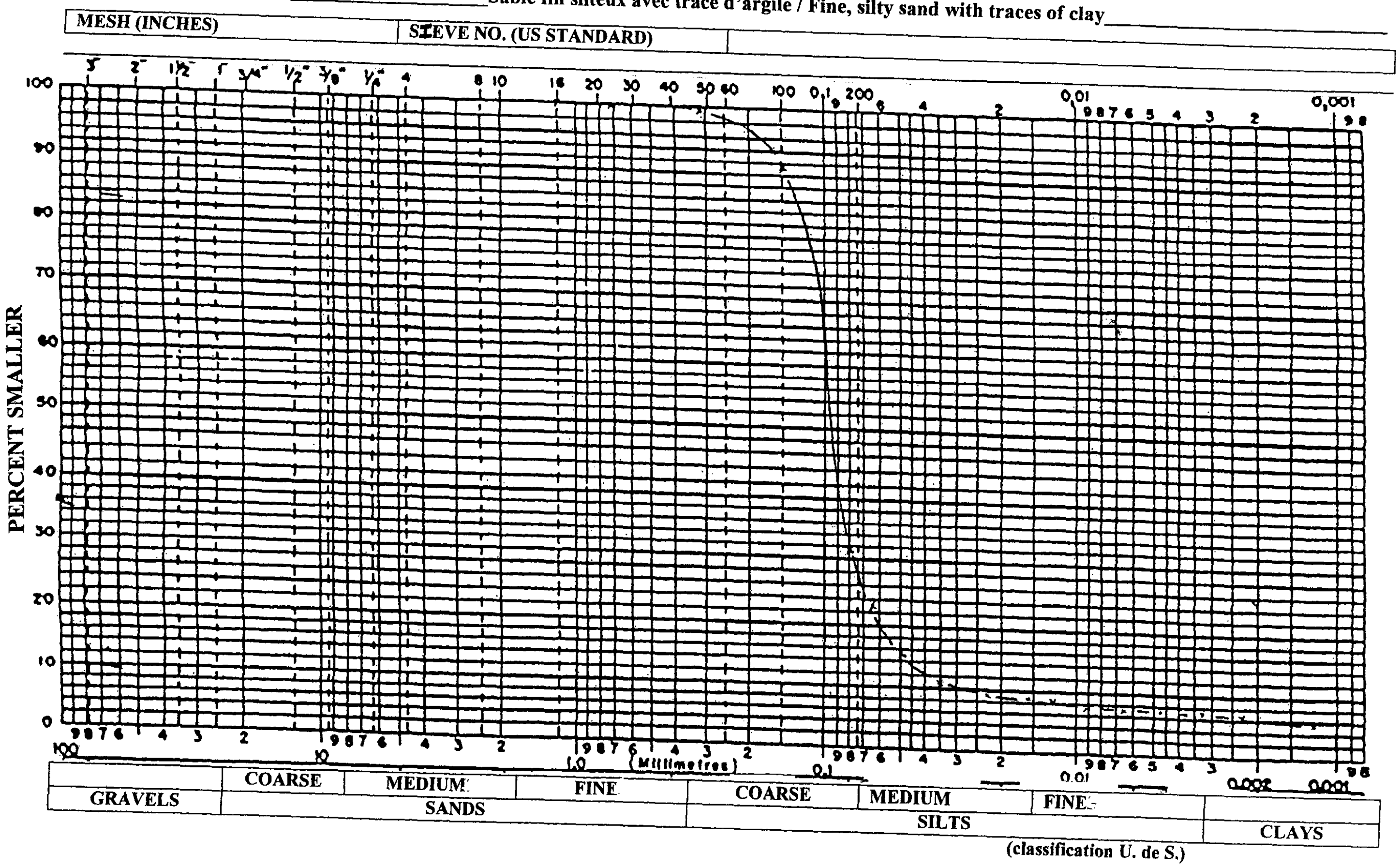
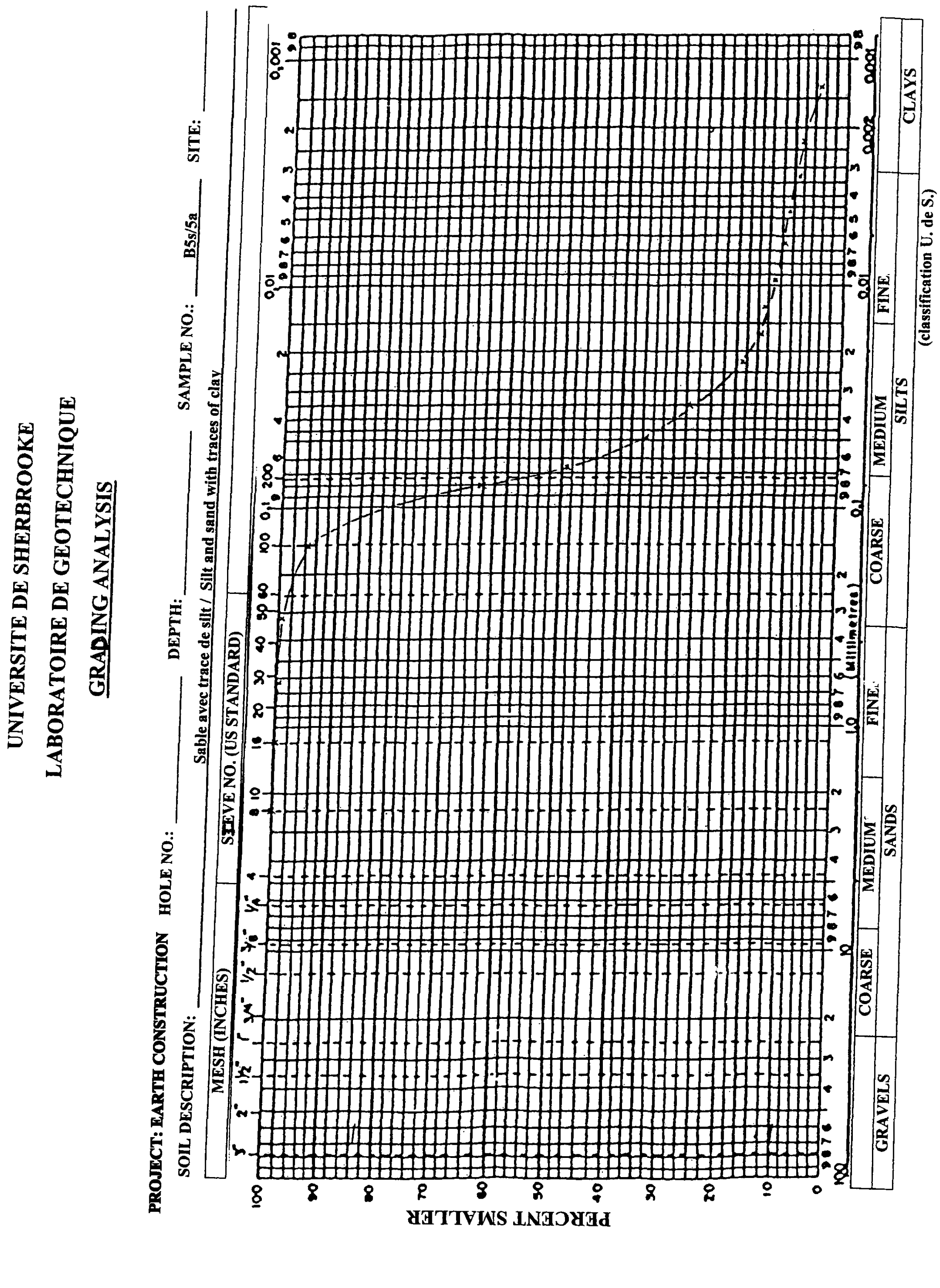
GRADING ANALYSIS

PROJECT: EARTH CONSTRUCTION HOLE NO.: ______ DEPTH: ______ SAMPLE NO.: A-5s(2) SITE. ______

SOIL DESCRIPTION: Sable fin silteux avec trace d'argile / Fine, silty sand with traces of clay

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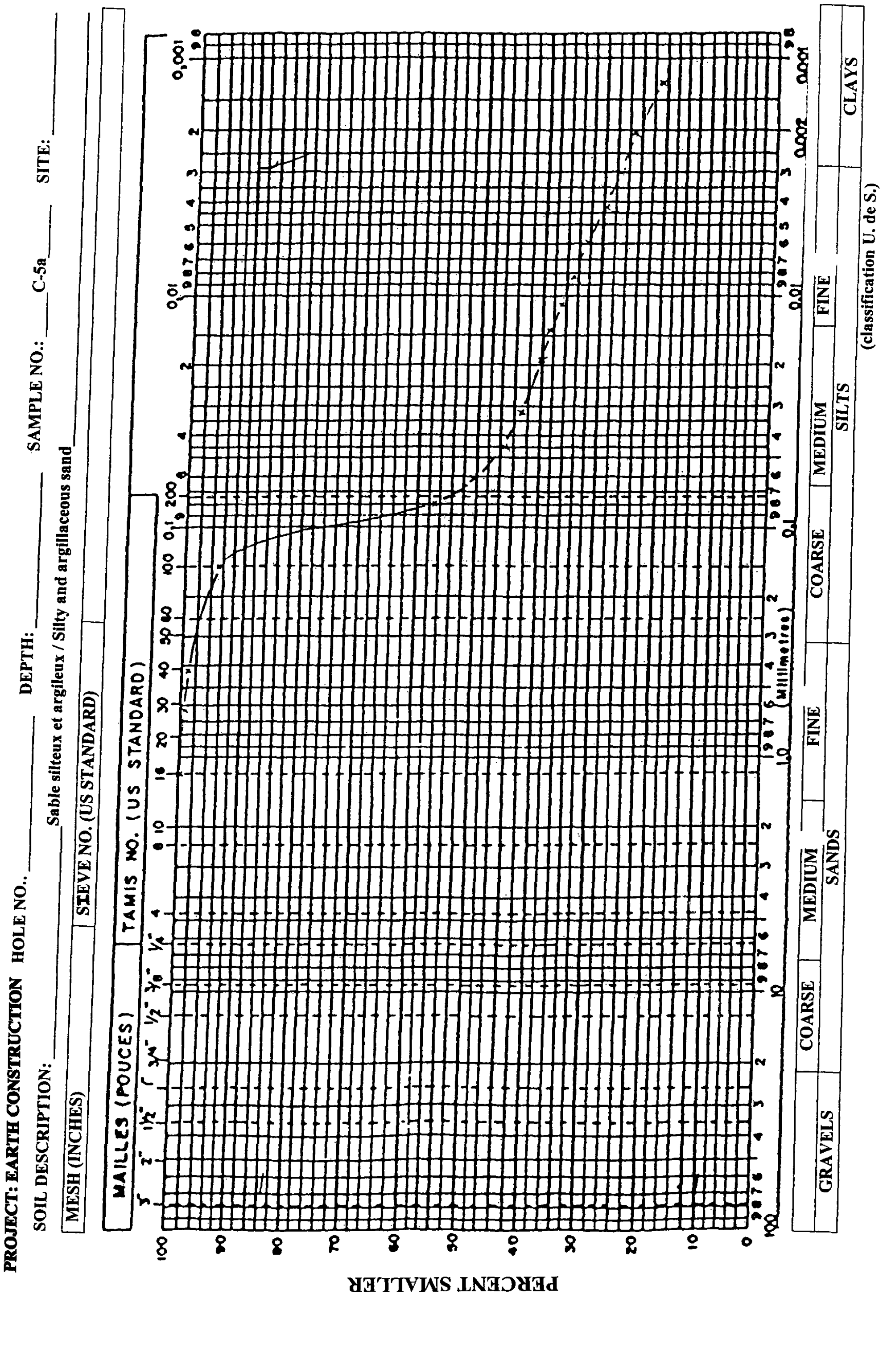
HOLE NO.:
DEPTH:
SAMPLE NO.: B5s/5a
SITE:
SOIL DESCRIPTION: Sable avec trace de silt / Silt and sand with traces of clay
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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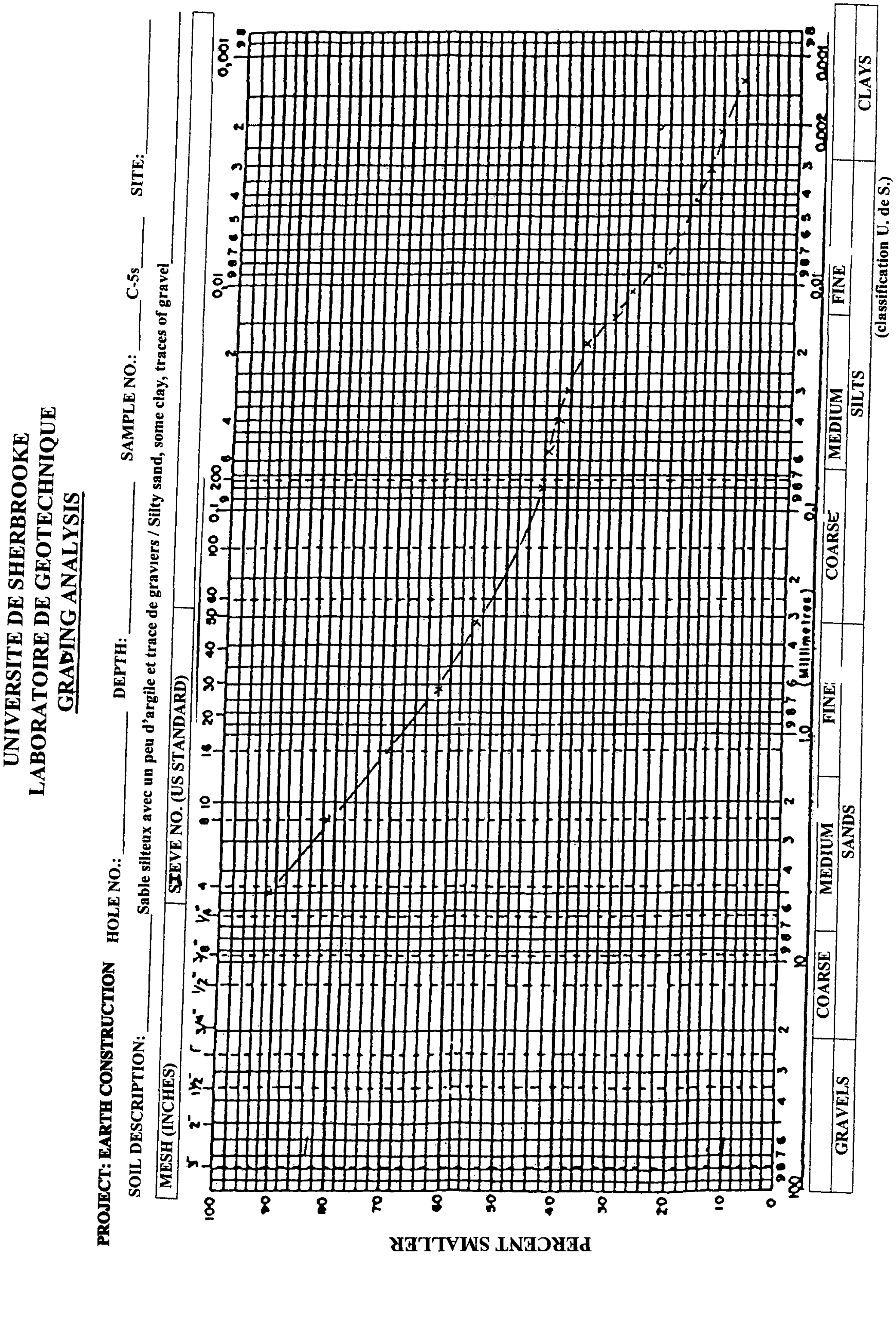
GRADING ANALYSIS
PROJECT: EARTH CONSTRUCTION
HOLE NO..
DEPTH:
SAMPLE NO.: C-5a
SITE:
SOIL DESCRIPTION: Sable silteux et argileux / Silty and argillaceous sand
MESH (INCHES)
SIEVE NO. (US STANDARD)
MAILLES (POUCES)
TAMIS NO. (US STANDARD)
(Millimetres)
PERCENT SMALLER
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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HOLE NO.:
DEPTH:
SAMPLE NO.: C-5s
SITE:
SOIL DESCRIPTION: Sable silteux avec un peu d'argile et trace de graviers / Silty sand, some clay, traces of gravel
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)

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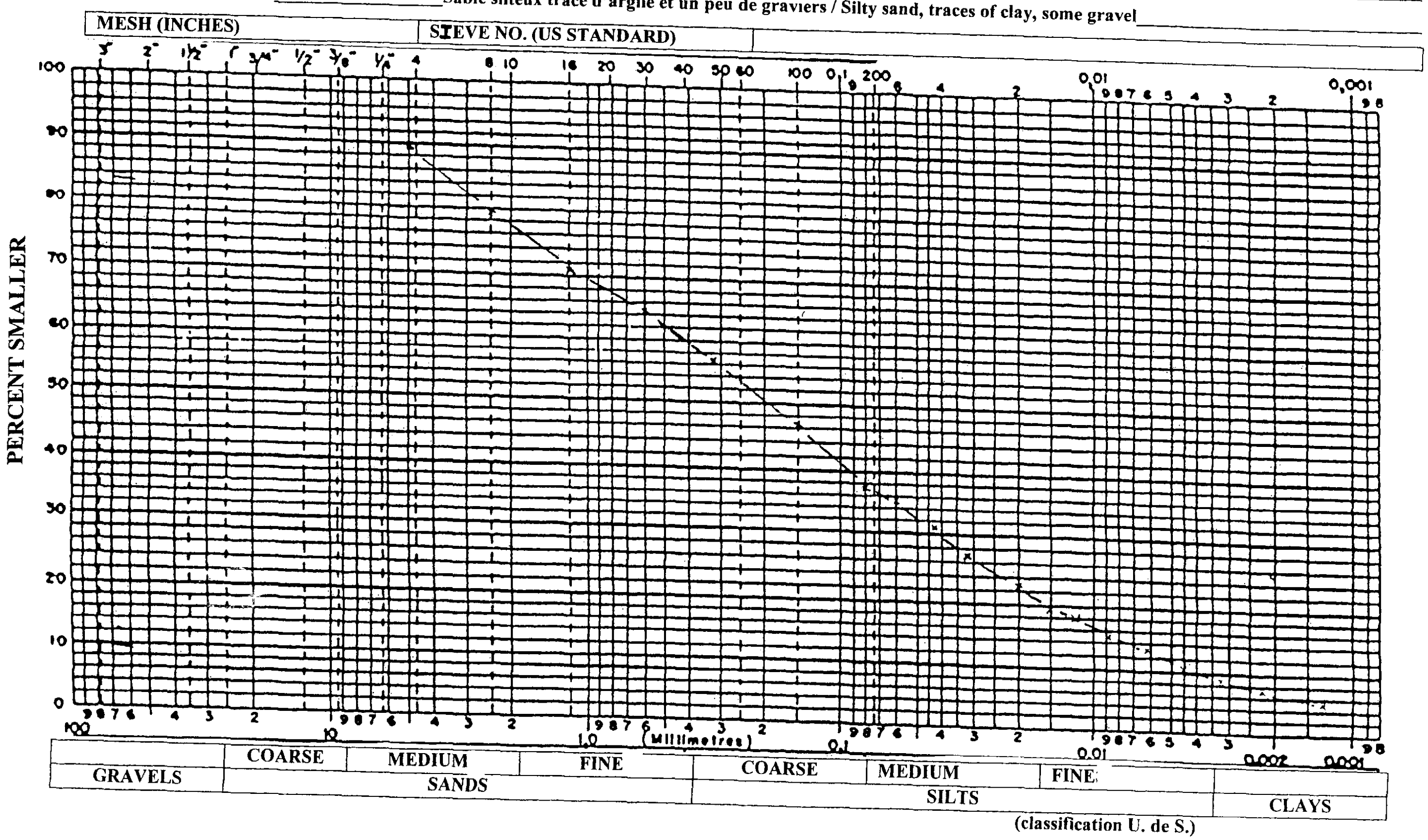
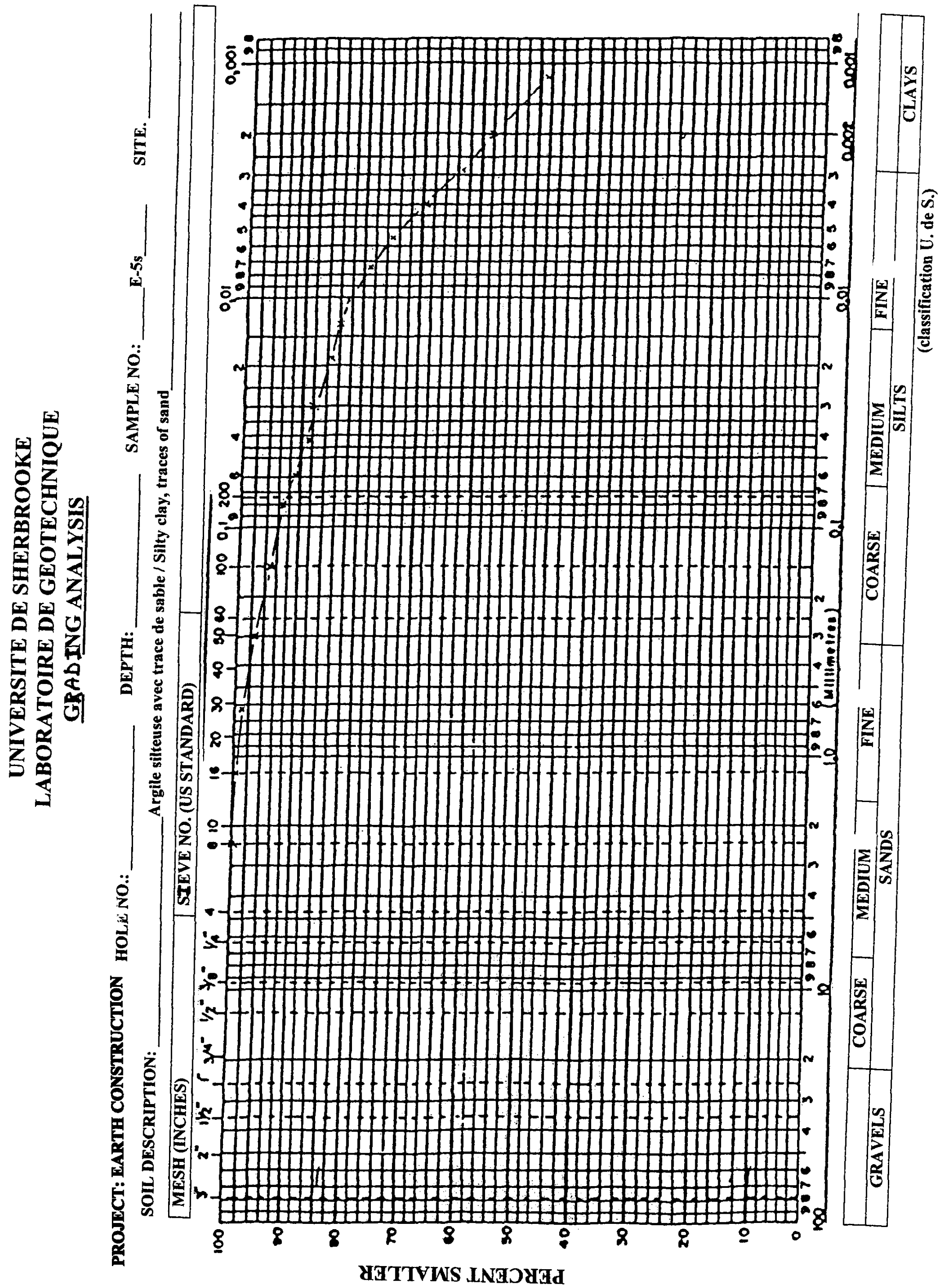
GRADING ANALYSIS

PROJECT: EARTH CONSTRUCTION HOLE NO.. ____________ DEPTH: ____________ SAMPLE NO.. ____D-5a____ SITE: ____________

SOIL DESCRIPTION: ____________Sable silteux trace d'argile et un peu de graviers / Silty sand, traces of clay, some gravel____________

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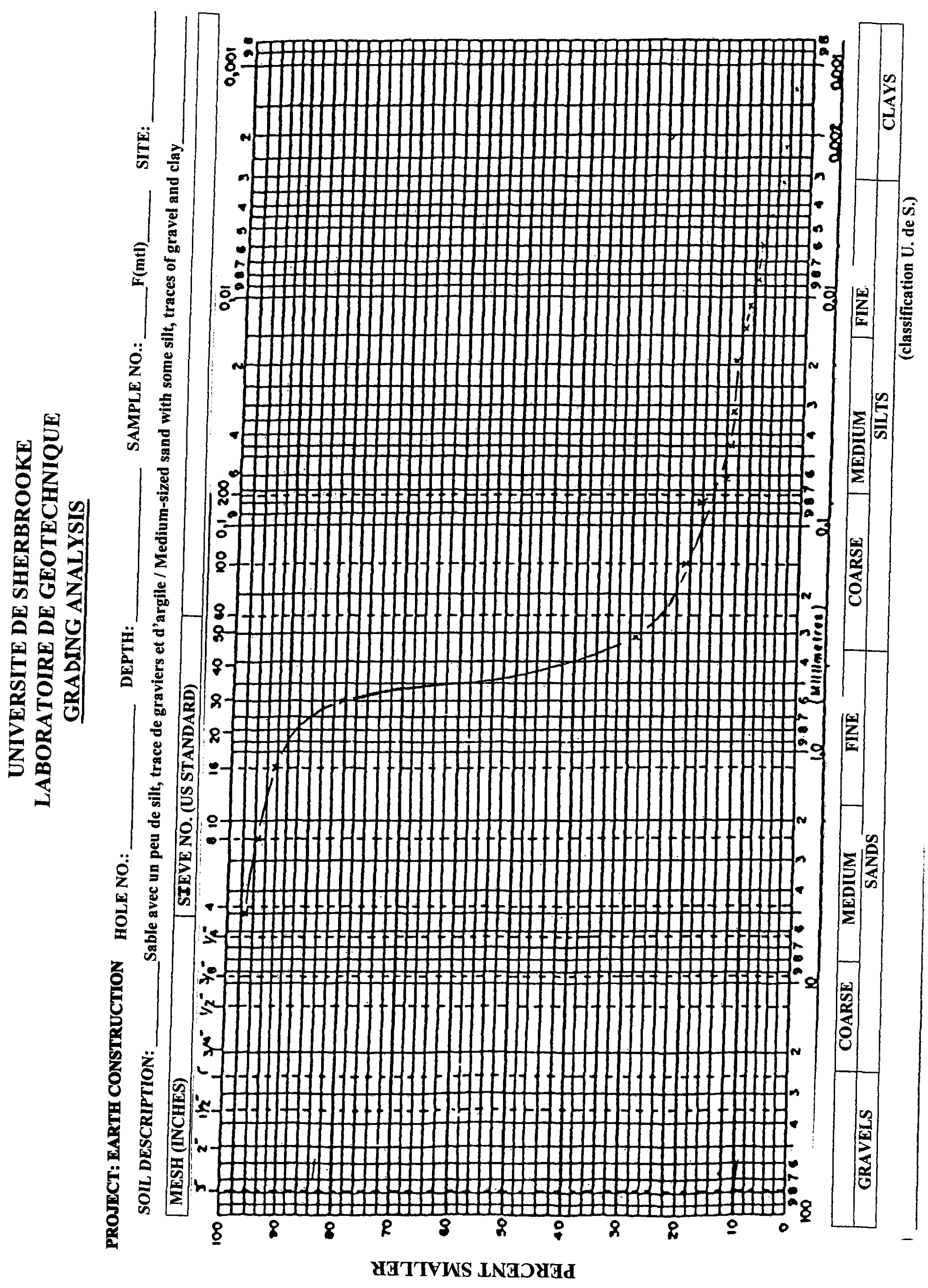
LABORATOIRE DE GEOTECHNIQUE
GRADING ANALYSIS
PROJECT: EARTH CONSTRUCTION
HOLE NO.:
DEPTH:
SAMPLE NO.: E-5s
SITE.
SOIL DESCRIPTION: Argile silteuse avec trace de sable / Silty clay, traces of sand
MESH (INCHES)
SIEVE NO. (US STANDARD)
(Millimetres)
PERCENT SMALLER
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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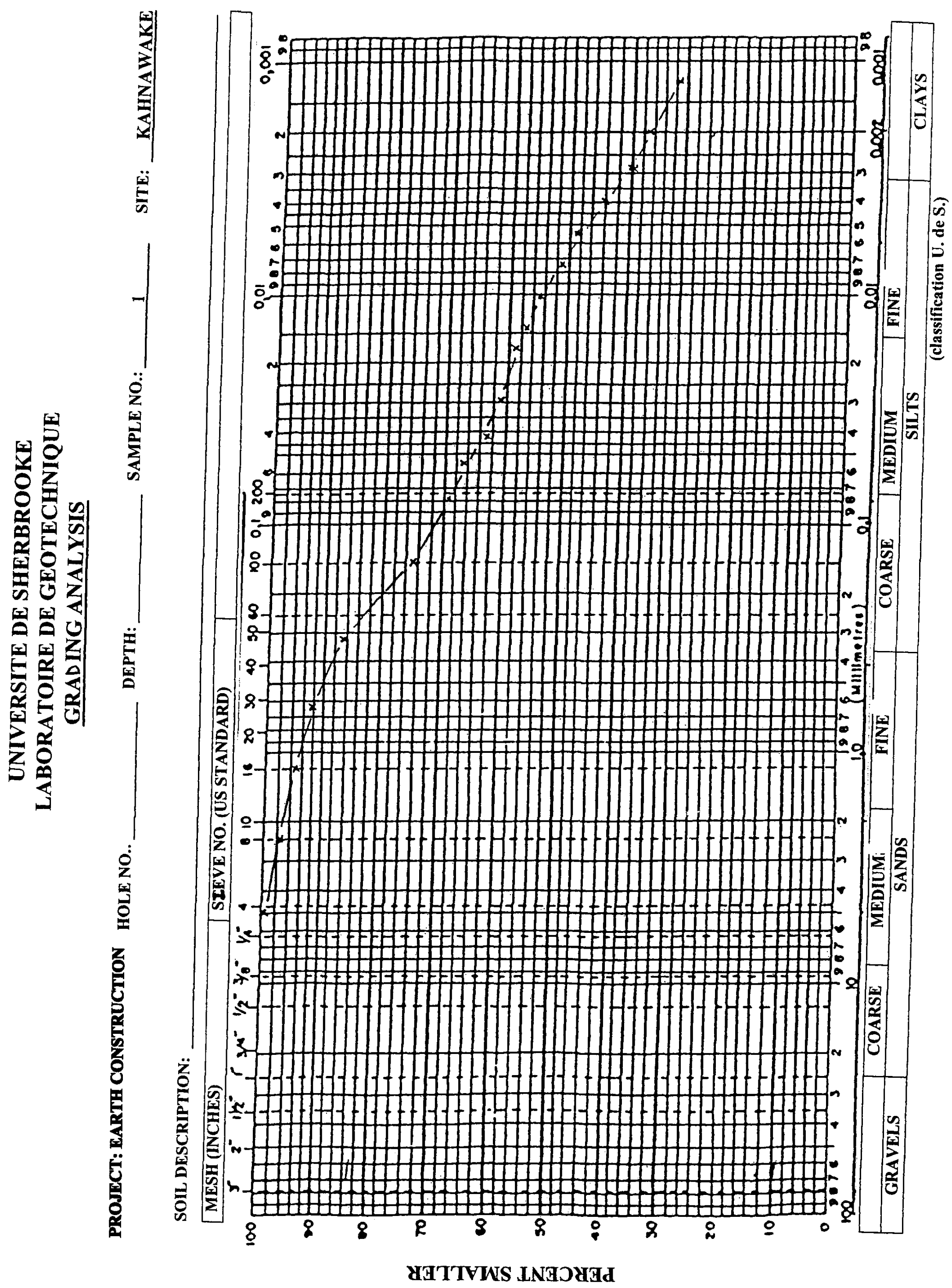
PROJECT: EARTH CONSTRUCTION
HOLE NO.:
DEPTH:
SAMPLE NO.:
F(mtl)
SITE:
SOIL DESCRIPTION:
Sable avec un peu de silt, trace de graviers et d'argile / Medium-sized sand with some silt, traces of gravel and clay
MESH (INCHES)
SIEVE NO. (US STANDARD)
(Millimetres)
PERCENT SMALLER
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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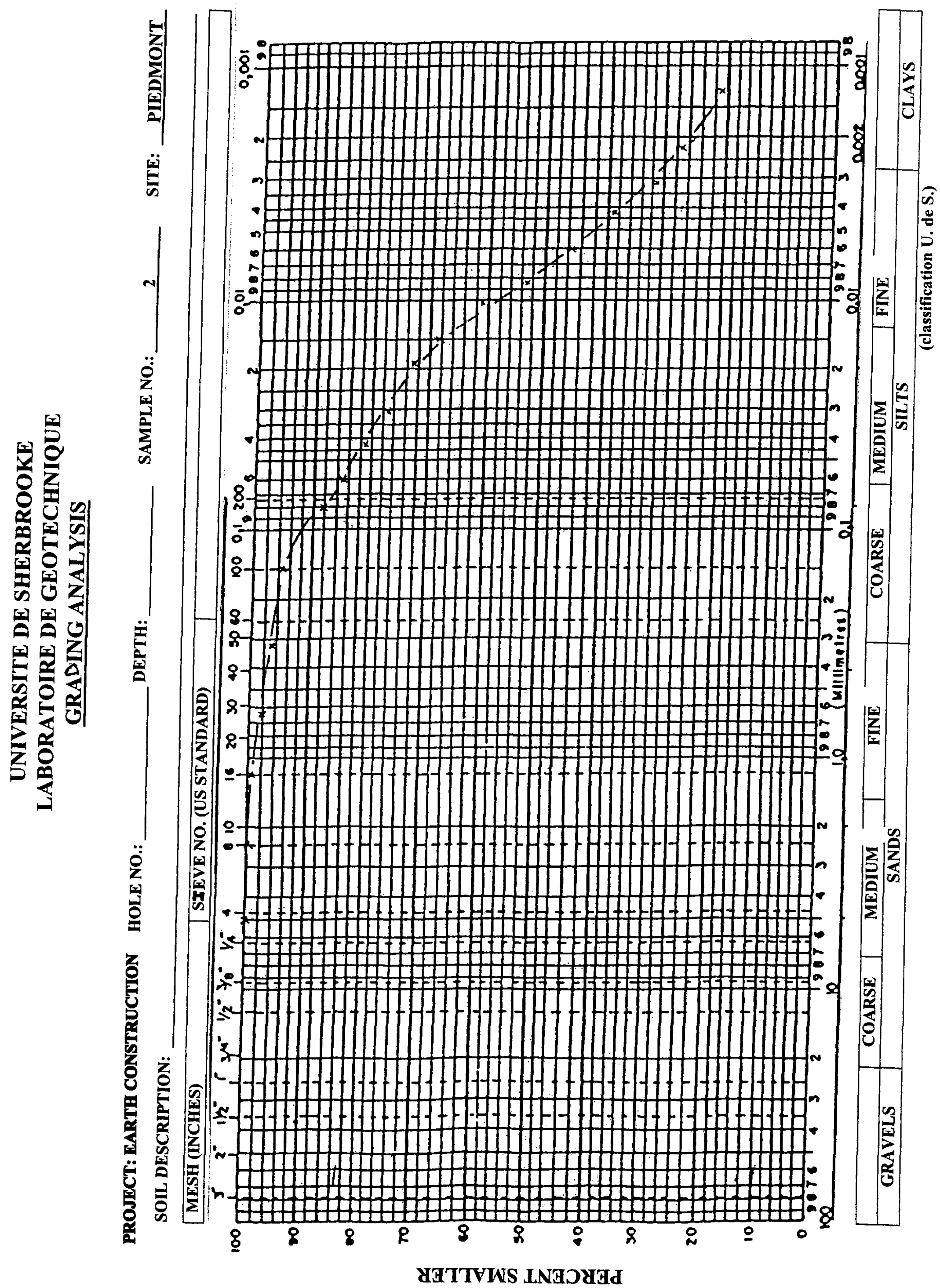
HOLE NO.:
DEPTH:
SAMPLE NO.: 1
SITE: KAHNAWAKE
SOIL DESCRIPTION:
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
SILTS
CLAYS
(classification U. de S.)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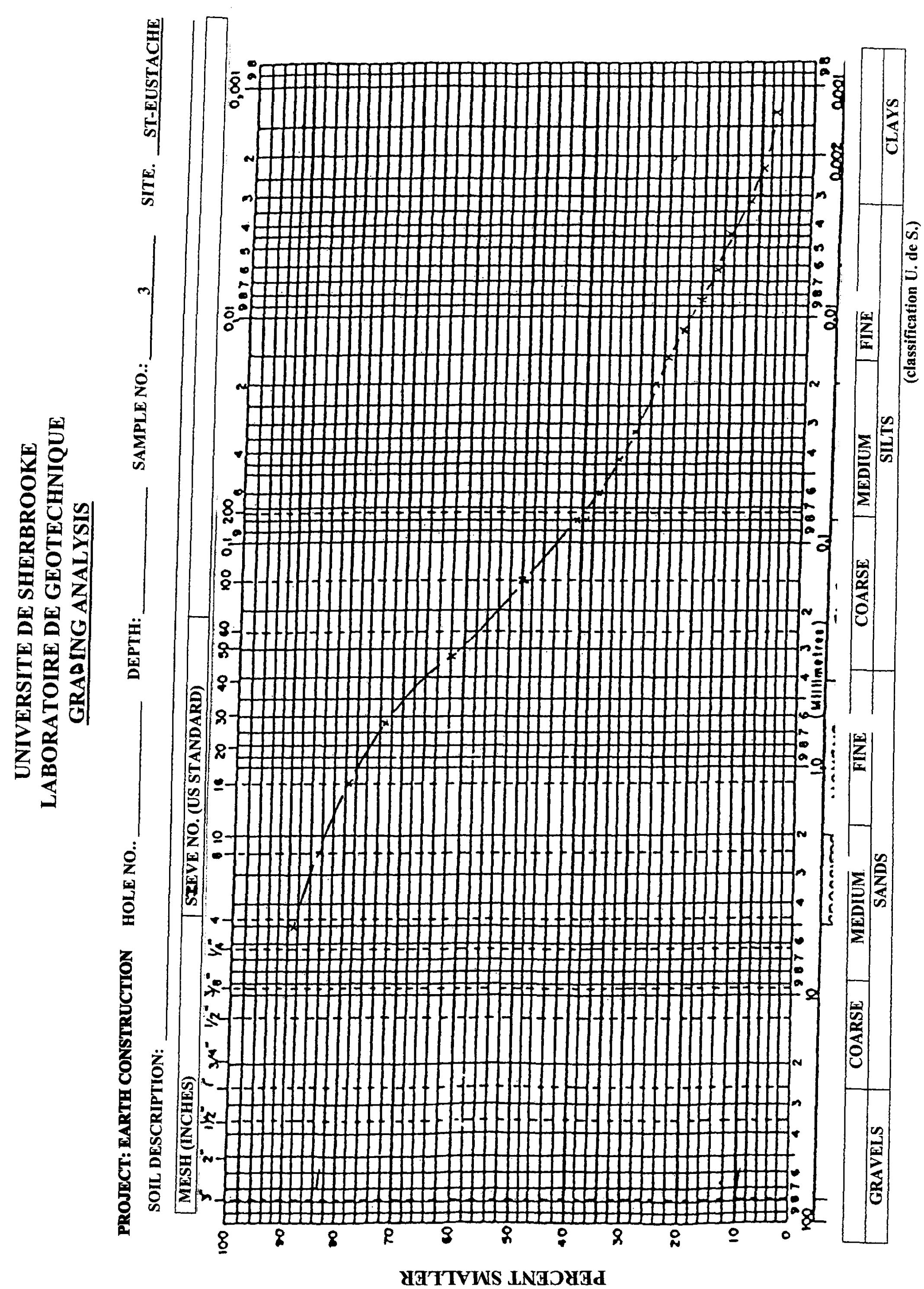
DEPTH:
SAMPLE NO.: 2
SITE: PIEDMONT
SOIL DESCRIPTION:
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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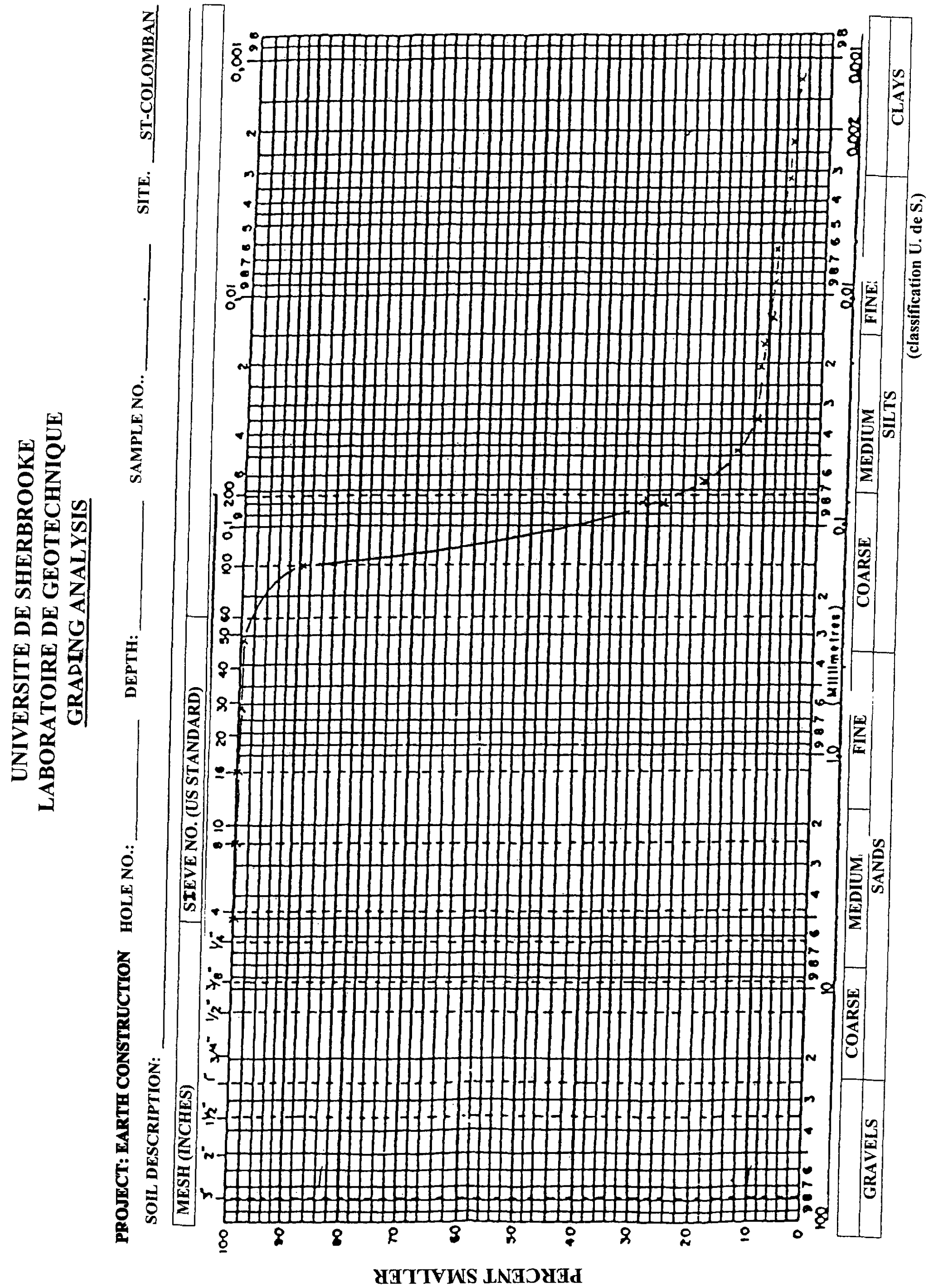
HOLE NO.
DEPTH:
SAMPLE NO.: 3
SITE. ST-EUSTACHE
SOIL DESCRIPTION:
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)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SOIL DESCRIPTION:
MESH (INCHES)
SIEVE NO. (US STANDARD)
PERCENT SMALLER
(Millimetres)
GRAVELS
COARSE
MEDIUM
FINE
SANDS
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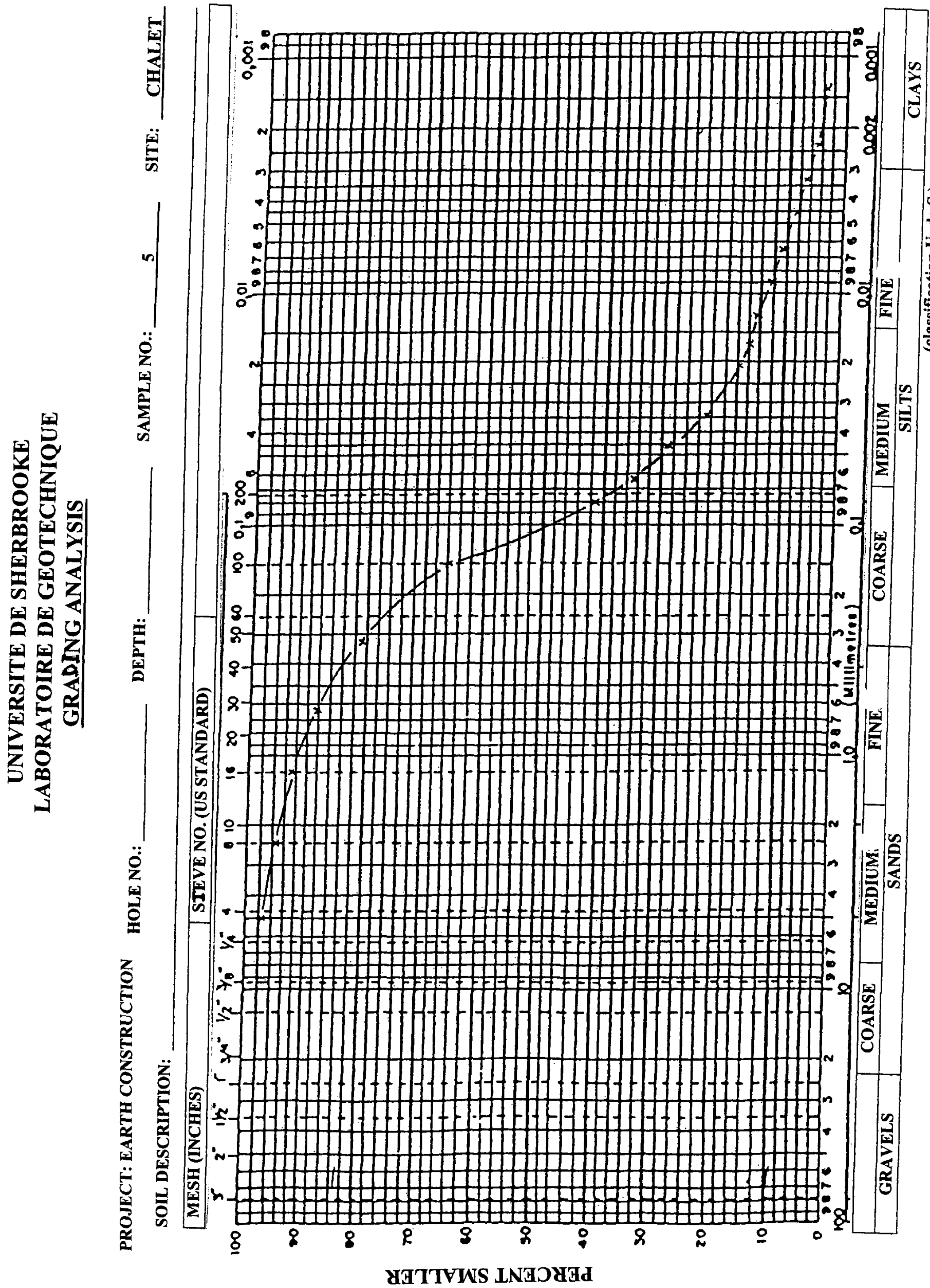
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PROJECT: EARTH CONSTRUCTION
HOLE NO.:
DEPTH:
SAMPLE NO.: 5
SITE: CHALET
SOIL DESCRIPTION:
MESH (INCHES)
SIEVE NO. (US STANDARD)
(Millimetres)
PERCENT SMALLER
GRAVELS
COARSE
MEDIUM
FINE
SANDS
COARSE
MEDIUM
FINE
SILTS
CLAYS
(classification U. de S.)

The Wall Simulations

YEAR 1
Wall Type = KAN-1

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = **Mineral Wool** 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = KAN-1

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAI
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 8 Wall simulation KAN-1, mineral wool

YEAR 2
WALL TYPE = KAN-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = **Mineral Wool** 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0010	0,4908	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0002	0,5321	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0015	0,4872	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0045	0,4366	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0004	0,2587	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0099	0,1016	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0373	0,0791	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0292	0,0700	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0035	0,1787	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0.0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Vertical air space
Plan 2 =
Plan 1 max. absorb , kg/m² = 0,00
Plan 2 max. absorb , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAF
JUN	0,0000	0,0010	0,0010	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0002	0,0002	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0015	0,0015	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0045	0,0045	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0004	0,0004	652	68	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0099	0,0099	373	371	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0373	0,0373	278	466	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0292	0,0292	246	426	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0035	0,0035	523	221	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 9 Wall simulation KAN-1, vertical air space

YEAR 2
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JUN	0,0010	0,4908	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0002	0,5321	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0015	0,4872	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0045	0,4366	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0004	0,2587	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0099	0,1016	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0373	0,0791	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0292	0,0700	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0035	0,1787	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0.0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) - (cm²/m²) = 0,0000

Plan 1 = Vertical air space
Plan 2 =
Plan 1 **max. absorb** :, kg/m² = 0,00
Plan 2 **max. absorb** :, kg/m² =

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0021	0,4720	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0024	0,5266	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0025	0,4726	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0066	0,4189	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0003	0,2973	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0022	0,2199	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0192	0,0693	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0514	0,0552	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0436	0,0496	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0082	0,1410	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0004	0,4886	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Wood Siding 13 MM
Plan 2 =
Plan 1 max. absorb , kg/m² = 1,60
Plan 2 max. absorb , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAF
JUN	0,0000	0,0021	0,0021	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0024	0,0024	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0025	0,0025	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0066	0,0066	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0003	0,0003	739	5	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0022	0,0022	618	102	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0192	0,0192	226	518	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0514	0,0514	197	547	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0436	0,0436	181	491	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0082	0,0082	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0004	0,0004	744	0	0,0000	0,0000	0,0000	0

Table 10 Wall simulation KAN-1, wood siding

YEAR 2
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0021	0,4720	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0024	0,5266	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0025	0,4726	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0066	0,4189	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0003	0,2973	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0022	0,2199	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0192	0,0693	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0514	0,0552	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0436	0,0496	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0082	0,1410	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0004	0,4886	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Wood Siding 13 MM
Plan 2 =
Plan 1 max. absorb kg/m² = 1,60
Plan 2 max. absorb kg/m² =

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Plan 1 Evap	Plan 1 Drain	Plan 1 Absorb	Plan 2 - kg/m² Conden	Plan 2 Evap	Plan 2 Drain	Plan 2 Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr (cm²/m²) = 1,0000
Leakage Area (NLA)

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 max. absorb kg/m² = 0,00
Plan 2 max. absorb kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Plan 1 Diffusion	Plan 1 Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Plan 2 Diffusion	Plan 2 Total	HAF
JUN	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 11 Wall simulation KAN-1, mineral wool

YEAR 2
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA, (cm²/m²) = 1,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 max. absorb kg/m² = 0,00
Plan 2 max. absorb kg/m² =

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0261	4,3505	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0241	4,8552	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0201	4,3251	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0788	4,0965	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0045	3,0820	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0332	2,5367	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,2655	0,8512	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,6793	0,6790	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,5429	0,6146	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,1154	1,6767	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0035	4,7101	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = Vertical Air Space
Plan 2 =
Plan 1 max. absorb kg/m² = 0,00
Plan 2 max. absorb kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAF
JUN	0,0252	0,0010	0,0261	720	0	0,0000	0,0000	0,0000	0
JUL	0,0239	0,0002	0,0241	744	0	0,0000	0,0000	0,0000	0
AUG	0,0187	0,0015	0,0201	744	0	0,0000	0,0000	0,0000	0
SEP	0,0743	0,0045	0,0788	720	0	0,0000	0,0000	0,0000	0
OCT	0,0045	0,0000	0,0045	744	0	0,0000	0,0000	0,0000	0
NOV	0,0328	0,0004	0,0332	652	68	0,0000	0,0000	0,0000	0
DEC	0,2556	0,0099	0,2655	373	371	0,0000	0,0000	0,0000	0
JAN	0,6420	0,0373	0,6793	278	466	0,0000	0,0000	0,0000	0
FEB	0,5138	0,0291	0,5429	246	426	0,0000	0,0000	0,0000	0
MAR	0,1118	0,0035	0,1154	523	221	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0035	0,0000	0,0035	744	0	0,0000	0,0000	0,0000	0

Table 12 Wall simulation KAN-1, vertical air space

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0261	4,3505	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0241	4,8552	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0201	4,3251	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0788	4,0965	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0045	3,0820	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0332	2,5367	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,2655	0,8512	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,6793	0,6790	0,0003	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,5429	0,6146	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,1154	1,6767	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0035	4,7101	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Vertical Air Space**
Plan 2 =
Plan 1 **max. absorb** kg/m² = 0,00
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	B
JUN	0,0252	0,0010	0,0261	720	0	0,0000	0,0000	0,0000	0
JUL	0,0239	0,0002	0,0241	744	0	0,0000	0,0000	0,0000	0
AUG	0,0187	0,0015	0,0201	744	0	0,0000	0,0000	0,0000	0
SEP	0,0743	0,0045	0,0788	720	0	0,0000	0,0000	0,0000	0
OCT	0,0045	0,0000	0,0045	744	0	0,0000	0,0000	0,0000	C
NOV	0,0328	0,0004	0,0332	652	68	0,0000	0,0000	0,0000	C
DEC	0,2556	0,0099	0,2655	373	371	0,0000	0,0000	0,0000	C
JAN	0,6420	0,0373	0,6793	278	466	0,0000	0,0000	0,0000	C
FEB	0,5138	0,0291	0,5429	246	426	0,0000	0,0000	0,0000	C
MAR	0,1118	0,0035	0,1154	523	221	0,0000	0,0000	0,0000	C
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	C
MAY	0,0035	0,0000	0,0035	744	0	0,0000	0,0000	0,0000	C

Table 12 Wall simulation KAN-1, vertical air space

YEAR 1
Wall Type = KAN-1

Month	Plan 1 - kg/m² Conden	Plan 1 Évap	Plan 1 Drain	Plan 1 Absorb	Plan 2 - kg/m² Conden	Plan 2 Evap	Plan 2 Drain	Plan 2 Absorb
JUN	0,0440	4,1841	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0446	4,8048	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0561	4,2181	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1232	3,9570	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0299	2,7489	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0682	2,1762	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4219	0,5850	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8741	0,4829	0,0000	0,3912	0,0000	0,0000	0,0000	0,0000
FEB	0,7278	0,4403	0,0000	0,6787	0,0000	0,0000	0,0000	0,0000
MAR	0,2081	1,3477	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0080	4,4504	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = Wood Siding 13 MM
Plan 2 =
Plan 1 max. absorb kg/m² = 1,60
Plan 2 max. absorb kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-1

Month	Plan 1 - kg/m² Leak	Plan 1 Diffusion	Plan 1 Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Plan 2 Diffusion	Plan 2 Total	HAF
JUN	0,0419	0,0021	0,0440	720	0	0,0000	0,0000	0,0000	0
JUL	0,0422	0,0024	0,0446	744	0	0,0000	0,0000	0,0000	0
AUG	0,0536	0,0025	0,0561	744	0	0,0000	0,0000	0,0000	0
SEP	0,1166	0,0066	0,1232	720	0	0,0000	0,0000	0,0000	0
OCT	0,0297	0,0003	0,0299	739	5	0,0000	0,0000	0,0000	0
NOV	0,0659	0,0022	0,0682	618	102	0,0000	0,0000	0,0000	0
DEC	0,4027	0,0192	0,4219	226	518	0,0000	0,0000	0,0000	0
JAN	0,8228	0,0513	0,8741	197	547	0,0000	0,0000	0,0000	0
FEB	0,6842	0,0436	0,7278	181	491	0,0000	0,0000	0,0000	0
MAR	0,1999	0,0082	0,2081	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0076	0,0004	0,0080	744	0	0,0000	0,0000	0,0000	0

Table 13 Wall simulation KAN-1, wood siding

YEAR 2
Wall Type = KAN-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
Month	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
JUN	0,0440	4,1841	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0446	4,8048	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0561	4,2181	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1232	3,9570	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0299	2,7489	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0682	2,1762	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4219	0,5850	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8741	0,4829	0,0000	0,3912	0,0000	0,0000	0,0000	0,0000
FEB	0,7278	0,4403	0,0000	0,6787	0,0000	0,0000	0,0000	0,0000
MAR	0,2081	1,3477	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0080	4,4504	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = **Monho.dyr**
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Wood Siding** 13 MM
Plan 2 =
Plan 1 **max. absorb** kg/m² = 1,60
Plan 2 **max. absorb** kg/m² =

YEAR 1
Wall Type = KAN-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
Month	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = **Monho.dyr**
Dew point = Monho. dyr
Leakage Area (NLA (cm²/m²) = 0,0000

Plan 1 = **MINERAL WOOL 90** MM
Plan 2 =
Plan 1 **max. absorb** kg/m² = 0,00
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-2

	Plan 1 - kg/m²					Plan 2 - kg/m²			
Month	**Leak**	Diffusion	Total	HAFZ	HBFZ	**Leak**	Diffusion	Total	HAE
JUN	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 14 Wall simulation KAN-2, mineral wool

Année 2
Type de mur = KAN-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
Mois	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
Jui	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jul	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Aoû	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Sep	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Oct	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Nov	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Déc	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jan	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Fév	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mar	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Avr	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mai	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Sortie pour Montreal, Quebec
Temp int (°C) = Monho.dyr
Point de rosée = Monho.dyr
Aire de la fuite (cm²/m²) = 0,0000

Plan 1 = **MINERAL WOOL 90 MM**
Plan 2 =
Plan 1 absorb max, kg/m² = 0,00
Plan 2 absorb max, kg/m² =

YEAR 1
Wall Type = KAN-2

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0004	0,7784	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0013	0,7714	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0030	0,6248	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0008	0,1898	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0228	0,1449	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0163	0,1228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0010	0,2776	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = **Monho.dyr**
Dew point = **Monho. dyr**
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB
Plan 2 =
Plan 1 **max. absorb** kg/m² = 63,10
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-2

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAF
JUN	0,0000	0,0004	0,0004	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0013	0,0013	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0030	0,0030	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	652	68	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0008	0,0008	373	371	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0228	0,0228	278	466	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0163	0,0163	246	426	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0010	0,0010	523	221	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 15 Wall simulation KAN-2, CEB

YEAR 2
Wall Type = KAN-2

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0004	0,7784	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0013	0,7714	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0030	0,6248	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0008	0,1898	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0228	0,1449	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0163	0,1228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0010	0,2776	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB
Plan 2 =
Plan 1 max. absorb kg/m² = 63,10
Plan 2 max. absorb kg/m² =

YEAR 1
Wall Type = KAN-2

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) - (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **max. absorb** kg/m² = 0,00
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-2

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAI
JUN	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0

Table 16 Wall simulation KAN-2, exterior air space

YEAR 2
Wall Type = KAN-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
Month	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **max. absorb** kg/m² = 0,00
Plan 2 **max. absorb** kg/m² =

YEAR 1
Wall Type = KAN-2

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **MINERAL WOOL** 90 MM
Plan 2 =
Plan 1 **max. absorb** kg/m² = 0,00
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-2

Month	Plan 1 - kg/m² Leak	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Leak	Diffusion	Total	HAF
JUN	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 17 Wall simulation KAN-2, mineral wool

YEAR 2

Wall Type = KAN-2

Month	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Mineral Wool** 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = KAN-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0355	4,5487	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0348	5,1016	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0412	4,5532	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1027	4,2110	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0165	3,0787	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0520	2,4511	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,3311	0,7856	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,7647	0,6316	0,0000	0,1332	0,0000	0,0000	0,0000	0,0000
FEB	0,6243	0,5657	0,0000	0,1917	0,0000	0,0000	0,0000	0,0000
MAR	0,1565	1,5921	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0060	4,8508	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = **Monho.dyr**
Dew point = Monho. dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = CEB
Plan 2 =
Plan 1 **max. absorb** kg/m² = 63,10
Plan 2 **max. absorb** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Wall Type = KAN-2

	Plan 1 - kg/m²					Plan 2 - kg/m²			
Month	**LEAK**	Diffusion	Total	HAFZ	HBFZ	**LEAK**	Diffusion	Total	HAF
JUN	0,0352	0,0004	0,0355	720	0	0,0000	0,0000	0,0000	0
JUL	0,0348	0,0000	0,0348	744	0	0,0000	0,0000	0,0000	0
AUG	0,0398	0,0013	0,0412	744	0	0,0000	0,0000	0,0000	0
SEP	0,0996	0,0030	0,1027	720	0	0,0000	0,0000	0,0000	0
OCT	0,0165	0,0000	0,0165	744	0	0,0000	0,0000	0,0000	0
NOV	0,0520	0,0000	0,0520	652	68	0,0000	0,0000	0,0000	0
DEC	0,3302	0,0008	0,3311	373	371	0,0000	0,0000	0,0000	0
JAN	0,7419	0,0228	0,7647	278	466	0,0000	0,0000	0,0000	0
FEB	0,6079	0,0163	0,6243	246	426	0,0000	0,0000	0,0000	0
MAR	0,1556	0,0010	0,1565	523	221	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0060	0,0000	0,0060	744	0	0,0000	0,0000	0,0000	0

Table 18 Wall simulation KAN-2, CEB

YEAR 2
WALL TYPE = KAN-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0355	4,5487	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0348	5,1016	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0412	4,5532	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1027	4,2110	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0165	3,0787	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0520	2,4511	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,3311	0,7856	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,7647	0,6316	0,0000	0,1332	0,0000	0,0000	0,0000	0,0000
FEB	0,6243	0,5657	0,0000	0,1917	0,0000	0,0000	0,0000	0,0000
MAR	0,1565	1,5921	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0060	4,8508	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = CEB
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 63,10
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = KAN-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0549	622394,7597	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0566	92288,9228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0802	815989,0673	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1491	167743,4411	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0545	436995,3607	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0912	392019,1510	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,5340	637959,5963	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,9676	553820,0957	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,8213	402241,8321	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2803	425546,1399	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0137	439871,9749	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 : Exterior Air Space
Plan 2 :
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE KAN-2

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HA
JUNE	0,0549	0,0000	0,0549	720	0	0,0000	0,0000	0,0000	0
JUL	0,0566	0,0000	0,0566	744	0	0,0000	0,0000	0,0000	0
AUG	0,0802	0,0000	0,0802	744	0	0,0000	0,0000	0,0000	0
SEP	0,1491	0,0000	0,1491	720	0	0,0000	0,0000	0,0000	0
OCT	0,0545	0,0000	0,0545	739	5	0,0000	0,0000	0,0000	0
NOV	0,0912	0,0000	0,0912	618	102	0,0000	0,0000	0,0000	0
DEC	0,5340	0,0000	0,5340	226	518	0,0000	0,0000	0,0000	0
JAN	0,9676	0,0000	0,9676	197	547	0,0000	0,0000	0,0000	0
FEB	0,8213	0,0000	0,8213	181	491	0,0000	0,0000	0,0000	0
MAR	0,2803	0,0000	0,2803	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0137	0,0000	0,0137	744	0	0,0000	0,0000	0,0000	0

Table 19. Wall simulation KAN-2, exterior air space

YEAR 2
WALL TYPE KAN-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0549	622394,7597	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0566	92288,9228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0802	815989,0673	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1491	167743,4411	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0545	436995,3607	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0912	392019,1510	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,5340	637959,5963	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,9676	553820,0957	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,8213	402241,8321	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2803	425546,1399	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0137	439871,9749	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec Plan 1 = Exterior Air Space
Int. Temp (°C) = Monho.dyr Plan 2 =
Dew point = Monho.dyr Plan 1 **Max. absorb.** kg/m² = 0,00
Leakage Area (NLA) (cm²/m²) = 1,0000 Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 63,10
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	715	5	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	609	135	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	455	289	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	426	246	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	703	41	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 20 Wall simulation KAN-3, CEB

YEAR 2
WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB
Plan 2 =
Plan 1 Max. absorb. kg/m² = 63,10
Plan 2 Max. absorb. kg/m² =

YEAR 1
WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0

Table 21 Wall simulation KAN-3, exterior air space

YEAR 2
WALL TYPE = KAN-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0021	5,0208	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0024	4,8562	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0153	4,6440	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0132	2,1704	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,1802	1,6993	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,1137	1,5653	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0045	3,0602	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec Plan 1 = CEB
Int. Temp (°C) = Monho.dyr Plan 2 =
Dew point = Monho.dyr Plan 1 **Max. absorb.** , kg/m² = 63,10
Leakage Area (NLA) (cm²/m²) = 1,0000 Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HA]
JUNE	0,0021	0,0000	0,0021	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0024	0,0000	0,0024	744	0	0,0000	0,0000	0,0000	0
SEP	0,0153	0,0000	0,0153	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	715	5	0,0000	0,0000	0,0000	0
DEC	0,0132	0,0000	0,0132	609	135	0,0000	0,0000	0,0000	0
JAN	0,1802	0,0000	0,1802	455	289	0,0000	0,0000	0,0000	0
FEB	0,1137	0,0000	0,1137	426	246	0,0000	0,0000	0,0000	0
MAR	0,0045	0,0000	0,0045	703	41	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 22 Wall simulation KAN-3, CEB

YEAR 2
WALL TYPE = KAN-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
JUNE	0,0021	5,0208	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0024	4,8562	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0153	4,6440	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0132	2,1704	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,1802	1,6993	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,1137	1,5653	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0045	3,0602	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = CEB
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 63,10
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0481	474518,5878	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0490	74917,6750	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0662	610827,0630	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1321	132746,4415	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0415	345982,7273	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0782	310196,1877	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4662	498411,7896	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8931	437023,2057	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,7508	322661,7397	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2388	332468,5771	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0091	338331,0995	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) ₃ (cm²/m²) = 1,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = KAN-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0481	0,0000	0,0481	720	0	0,0000	0,0000	0,0000	0
JUL	0,0490	0,0000	0,0490	744	0	0,0000	0,0000	0,0000	0
AUG	0,0662	0,0000	0,0662	744	0	0,0000	0,0000	0,0000	0
SEP	0,1321	0,0000	0,1321	720	0	0,0000	0,0000	0,0000	0
OCT	0,0415	0,0000	0,0415	739	5	0,0000	0,0000	0,0000	0
NOV	0,0782	0,0000	0,0782	618	102	0,0000	0,0000	0,0000	0
DEC	0,4662	0,0000	0,4662	226	518	0,0000	0,0000	0,0000	0
JAN	0,8931	0,0000	0,8931	197	547	0,0000	0,0000	0,0000	0
FEB	0,7508	0,0000	0,7508	181	491	0,0000	0,0000	0,0000	0
MAR	0,2388	0,0000	0,2388	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0091	0,0000	0,0091	744	0	0,0000	0,0000	0,0000	0

Table 23 Wall simulation KAN-3, exterior air space

YEAR 2
WALL TYPE = KAN-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0481	474518,5878	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0490	74917,6750	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0662	610827,0630	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1321	132746,4415	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0415	345982,7273	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0782	310196,1877	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4662	498411,7896	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8931	437023,2057	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,7508	322661,7397	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2388	332468,5771	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0091	338331,0995	0,0000	0,0000	0,0000	0,0000	0,0000	0.0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-1

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 24 Wall simulation LAV-1, mineral wool

YEAR 2

Type de mur = LAV-1

Mois	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
Jui	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jul	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Aoû	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Sep	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Oct	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Nov	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Déc	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jan	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Fév	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mar	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Avr	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mai	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Sortie pour Montreal, Quebec
Temp int (°C) = Monho.dyr
Point de rosée = Monho.dyr
Aire de la fuite (cm²/m²) = 0,0000

Plan 1 = **MINERAL WOOL 90 MM**
Plan 2 =
Plan 1 absorb max, kg/m² = 0,00
Plan 2 absorb max, kg/m² =

YEAR 1

Type de mur = LAV-1

Mois	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
Jui	0,0006	0,3854	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jul	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Aoû	0,0010	0,3820	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Sep	0,0028	0,3366	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Oct	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Nov	0,0002	0,2022	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Déc	0,0054	0,0852	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jan	0,0243	0,0659	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Fév	0,0190	0,0583	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mar	0,0021	0,1432	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Avr	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mai	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Sortie pour Montreal, Quebec
Temp int (°C) = Monho.dyr
Point de rosée = Monho.dyr
Aire de la fuite (cm²/m²) = 0,0000

Plan 1 = Vertical Air Space
Plan 2 =
Plan 1 absorb max, kg/m² = 0,00
Plan 2 absorb max, kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

Type de mur = LV-1

MOIS	Plan 1 - kg/m² Fuite	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² Fuite	Diffusion	Total	HAF
Jui	0,0000	0,0006	0,0006	720	0	0,0000	0,0000	0,0000	0
Jul	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
Aoû	0,0000	0,0010	0,0010	744	0	0,0000	0,0000	0,0000	0
Sep	0,0000	0,0028	0,0028	720	0	0,0000	0,0000	0,0000	0
Oct	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
Nov	0,0000	0,0002	0,0002	652	68	0,0000	0,0000	0,0000	0
Déc	0,0000	0,0054	0,0054	373	371	0,0000	0,0000	0,0000	0
Jan	0,0000	0,0243	0,0243	278	466	0,0000	0,0000	0,0000	0
Fév	0,0000	0,0190	0,0190	246	426	0,0000	0,0000	0,0000	0
Mar	0,0000	0,0021	0,0021	523	221	0,0000	0,0000	0,0000	0
Avr	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
Mai	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 25 Wall simulation LAV-1, vertical air space

YEAR 2
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0006	0,3854	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0010	0,3820	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0028	0,3366	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0002	0,2022	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0054	0,0852	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0243	0,0659	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0190	0,0583	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0021	0,1432	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Vertical Air Space
Plan 2 =
Plan 1 absorb max, kg/m² = 0,00
Plan 2 absorb max, kg/m² =

YEAR 1
WALL TYPE = LAV-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0010	0,3701	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0013	0,4083	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0015	0,3702	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0045	0,3226	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0001	0,2339	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0010	0,1709	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0110	0,0578	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0341	0,0456	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0292	0,0408	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0043	0,1118	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0002	0,3822	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = **Wood Siding** 13 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 1,60
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-1

	Plan 1 - kg/m²					Plan 2 - kg/m²			
MONTH	LEAK	Diffusion	Total	HAFZ	HBFZ	LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0010	0,0010	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0013	0,0013	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0015	0,0015	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0045	0,0045	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0001	0,0001	739	5	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0010	0,0010	618	102	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0110	0,0110	226	518	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0341	0,0341	197	547	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0292	0,0292	181	491	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0043	0,0043	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0002	0,0002	744	0	0,0000	0,0000	0,0000	0

Table 26 Wall simulation LAV-1, wood siding

YEAR 2
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JL	0,0010	0,3701	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JI	0,0013	0,4083	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0015	0,3702	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0045	0,3226	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0001	0,2339	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0010	0,1709	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0110	0,0578	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0341	0,0456	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0292	0,0408	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0043	0,1118	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0002	0,3822	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = **Wood Siding** 13 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 1,60
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-1

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 27· Wall simulation LAV-1, mineral wool

YEAR 2
WALL TYPE = LAV-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0255	4,2474	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0236	4,7368	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0196	4,2214	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0764	3,9984	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0045	3,0158	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0327	2,4855	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,2592	0,8391	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,6638	0,6690	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,5304	0,6056	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,1130	1,6461	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0034	4,6015	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Vertical Air Space**
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-1

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0249	0,0006	0,0255	720	0	0,0000	0,0000	0,0000	0
JUL	0,0236	0,0000	0,0236	744	0	0,0000	0,0000	0,0000	0
AUG	0,0186	0,0010	0,0196	744	0	0,0000	0,0000	0,0000	0
SEP	0,0736	0,0028	0,0764	720	0	0,0000	0,0000	0,0000	0
OCT	0,0045	0,0000	0,0045	744	0	0,0000	0,0000	0,0000	0
NOV	0,0325	0,0002	0,0327	652	68	0,0000	0,0000	0,0000	0
DEC	0,2538	0,0054	0,2592	373	371	0,0000	0,0000	0,0000	0
JAN	0,6395	0,0243	0,6638	278	466	0,0000	0,0000	0,0000	0
FEB	0,5114	0,0190	0,5304	246	426	0,0000	0,0000	0,0000	0
MAR	0,1108	0,0021	0,1130	523	221	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0034	0,0000	0,0034	744	0	0,0000	0,0000	0,0000	0

Table 28 Wall simulation LAV-w, vertical air space

YEAR 2

WALL TYPE = LAV-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0255	4,2474	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0236	4,7368	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0196	4,2214	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0764	3,9984	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0045	3,0158	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0327	2,4855	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,2592	0,8391	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,6638	0,6690	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,5304	0,6056	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,1130	1,6461	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0034	4,6015	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Vertical Air Space**
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = LAV-1

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0428	4,0832	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0434	4,6868	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0548	4,1164	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1208	3,8616	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0295	2,6875	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0667	2,1295	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4124	0,5751	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8554	0,4743	0,0000	0,3811	0,0000	0,0000	0,0000	0,0000
FEB	0,7121	0,4325	0,0000	0,6606	0,0000	0,0000	0,0000	0,0000
MAR	0,2034	1,3204	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0078	4,3457	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Wood Siding** 13 MM
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 1,60
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-1

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0418	0,0010	0,0428	720	0	0,0000	0,0000	0,0000	0
JUL	0,0421	0,0013	0,0434	744	0	0,0000	0,0000	0,0000	0
AUG	0,0534	0,0015	0,0548	744	0	0,0000	0,0000	0,0000	0
SEP	0,1163	0,0045	0,1208	720	0	0,0000	0,0000	0,0000	0
OCT	0,0294	0,0001	0,0295	739	5	0,0000	0,0000	0,0000	0
NOV	0,0657	0,0010	0,0667	618	102	0,0000	0,0000	0,0000	0
DEC	0,4014	0,0110	0,4124	226	518	0,0000	0,0000	0,0000	0
JAN	0,8213	0,0341	0,8554	197	547	0,0000	0,0000	0,0000	0
FEB	0,6829	0,0292	0,7121	181	491	0,0000	0,0000	0,0000	0
MAR	0,1991	0,0043	0,2034	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0076	0,0002	0,0078	744	0	0,0000	0,0000	0,0000	0

Table 29 Wall simulation LAV-1, wood siding

YEAR 2
WALL TYPE = LAV-1

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0428	4,0832	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0434	4,6868	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0548	4,1164	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1208	3,8616	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0295	2,6875	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0667	2,1295	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4124	0,5751	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8554	0,4743	0,0000	0,3811	0,0000	0,0000	0,0000	0,0000
FEB	0,7121	0,4325	0,0000	0,6606	0,0000	0,0000	0,0000	0,0000
MAR	0,2034	1,3204	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0078	4,3457	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **Wood Siding** 13 MM
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 1,60
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = 1 MINERAL WOOL 90 MM
Plan 2 = --
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 30 Wall simulation LAV-2, mineral wool

YEAR 2
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0003	0,5590	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0010	0,5545	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0023	0,4490	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0009	0,1313	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0178	0,1003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0135	0,0853	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0010	0,1951	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 43,45
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0003	0,0003	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0010	0,0010	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0023	0,0023	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	739	5	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	618	102	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0009	0,0009	226	518	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0178	0,0178	197	547	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0135	0,0135	181	491	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0010	0,0010	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 31 Wall simulation LAV-2, CEB2

YEAR 2
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0003	0,5590	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0010	0,5545	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0023	0,4490	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0009	0,1313	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0178	0,1003	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0135	0,0853	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0010	0,1951	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) e (cm²/m²) = 0,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 43,45
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0

Table 32 Wall simulation LAV-2, exterior air space

YEAR 2
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

YEAR 1
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = **MINERAL WOOL 90 MM**
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

	Plan 1 - kg/m²					Plan 2 - kg/m²			
MONTH	**LEAK**	Diffusion	Total	HAFZ	HBFZ	**LEAK**	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	672	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 33 Wall simulation LAV-2, mineral wool

YEAR , 2
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Évap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = MINERAL WOOL 90 MM
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0372	4,3143	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0366	4,8715	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0443	4,3269	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1062	4,0228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0198	2,9023	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0556	2,3120	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,3496	0,7072	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,7803	0,5723	0,0000	0,2081	0,0000	0,0000	0,0000	0,0000
FEB	0,6408	0,5151	0,0000	0,3338	0,0000	0,0000	0,0000	0,0000
MAR	0,1678	1,4825	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0064	4,6018	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 43,45
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0369	0,0003	0,0372	720	0	0,0000	0,0000	0,0000	0
JUL	0,0366	0,0000	0,0366	744	0	0,0000	0,0000	0,0000	0
AUG	0,0433	0,0010	0,0443	744	0	0,0000	0,0000	0,0000	0
SEP	0,1039	0,0023	0,1062	720	0	0,0000	0,0000	0,0000	0
OCT	0,0198	0,0000	0,0198	739	5	0,0000	0,0000	0,0000	0
NOV	0,0556	0,0000	0,0556	618	102	0,0000	0,0000	0,0000	0
DEC	0,3487	0,0009	0,3496	226	518	0,0000	0,0000	0,0000	0
JAN	0,7625	0,0178	0,7803	197	547	0,0000	0,0000	0,0000	0
FEB	0,6274	0,0135	0,6408	181	491	0,0000	0,0000	0,0000	0
MAR	0,1668	0,0010	0,1678	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0064	0,0000	0,0064	744	0	0,0000	0,0000	0,0000	0

Table 34 Wall simulation LAV-2, CEB2

YEAR 2
WALL TYPE = LAV-2

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 ,/m² Conden	Evap	Drain	Absorb
JUNE	0,0372	4,3143	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0366	4,8715	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0443	4,3269	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1062	4,0228	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0198	2,9023	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0556	2,3120	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,3496	0,7072	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,7803	0,5723	0,0000	0,2081	0,0000	0,0000	0,0000	0,0000
FEB	0,6408	0,5151	0,0000	0,3338	0,0000	0,0000	0,0000	0,0000
MAR	0,1678	1,4825	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0064	4,6018	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec Plan 1 = CEB2
Int. Temp (°C) = Monho.dyr Plan 2 =
Dew point = Monho.dyr Plan 1 **Max. absorb.** , kg/m² = 43,45
Leakage Area (NLA) (cm²/m²) = 1,0000 Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0548	324182,5153	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0565	48093,5881	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0801	424964,3392	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1490	87395,6117	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0544	227675,0380	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0911	204240,4491	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,5336	332341,3427	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,9671	288529,2172	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,8209	209584,4028	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2801	221686,3170	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0137	229127,6046	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-2

	Plan 1 - kg/m²					Plan 2 - kg/m²			
MONTH	**LEAK**	Diffusion	Total	HAFZ	HBFZ	**LEAK**	Diffusion	Total	HAF
JUNE	0,0548	0,0000	0,0548	720	0	0,0000	0,0000	0,0000	0
JUL	0,0565	0,0000	0,0565	744	0	0,0000	0,0000	0,0000	0
AUG	0,0801	0,0000	0,0801	744	0	0,0000	0,0000	0,0000	0
SEP	0,1490	0,0000	0,1490	720	0	0,0000	0,0000	0,0000	0
OCT	0,0544	0,0000	0,0544	739	5	0,0000	0,0000	0,0000	0
NOV	0,0911	0,0000	0,0911	618	102	0,0000	0,0000	0,0000	0
DEC	0,5336	0,0000	0,5336	226	518	0,0000	0,0000	0,0000	0
JAN	0,9671	0,0000	0,9671	197	547	0,0000	0,0000	0,0000	0
FEB	0,8209	0,0000	0,8209	181	491	0,0000	0,0000	0,0000	0
MAR	0,2801	0,0000	0,2801	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0137	0,0000	0,0137	744	0	0,0000	0,0000	0,0000	0

Table 35 Wall simulation LAV-2, exterior air space

YEAR 2
WALL TYPE = LAV-2

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0548	324182,5153	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0565	48093,5881	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0801	424964,3392	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1490	87395,6117	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0544	227675,0380	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0911	204240,4491	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,5336	332341,3427	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,9671	288529,2172	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,8209	209584,4028	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2801	221686,3170	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0137	229127,6046	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Exterior Air Space
Plan 1 =
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 43,45
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	715	5	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	609	135	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	455	289	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	426	246	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	703	41	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 36 Wall simulation LAV-3, CEB2

YEAR 2
WALL TYPE = LAV-3

MONTH	Plan 1 - kg/m² Conden	Évap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 43,45
Plan 2 **Max. absorb.** , kg/m² =

YEAR 1
WALL TYPE = LAV-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** kg/m² = 0,00
Plan 2 **Max. absorb.** kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
AUG	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
SEP	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
DEC	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
JAN	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
FEB	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	0	0	0,0000	0,0000	0,0000	0

Table 37 Wall simulation LAV-3, exterior air space

YEAR 2
WALL TYPE = LAV-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 0,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.**, kg/m² = 0,00
Plan 2 **Max. absorb.**, kg/m² =

YEAR 1
WALL TYPE = LAV-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0023	4,8154	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0027	4,6611	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0156	4,4801	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0143	2,0405	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,1856	1,5907	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,1175	1,4669	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0049	2,9167	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = CEB2
Plan 2 =
Plan 1 Max. absorb. , kg/m² = 43,45
Plan 2 Max. absorb. , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HAF
JUNE	0,0023	0,0000	0,0023	720	0	0,0000	0,0000	0,0000	0
JUL	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
AUG	0,0027	0,0000	0,0027	744	0	0,0000	0,0000	0,0000	0
SEP	0,0156	0,0000	0,0156	720	0	0,0000	0,0000	0,0000	0
OCT	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0
NOV	0,0000	0,0000	0,0000	715	5	0,0000	0,0000	0,0000	0
DEC	0,0143	0,0000	0,0143	609	135	0,0000	0,0000	0,0000	0
JAN	0,1856	0,0000	0,1856	455	289	0,0000	0,0000	0,0000	0
FEB	0,1175	0,0000	0,1175	426	246	0,0000	0,0000	0,0000	0
MAR	0,0049	0,0000	0,0049	703	41	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	720	0	0,0000	0,0000	0,0000	0
MAY	0,0000	0,0000	0,0000	744	0	0,0000	0,0000	0,0000	0

Table 38 Wall simulation LAV-3, CEB2

YEAR 2
WALL TYPE = LAV-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
MONTH	Conden	Evap	Drain	Absorb	Conden	Evap	Drain	Absorb
JUNE	0,0023	4,8154	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0027	4,6611	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,0156	4,4801	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,0143	2,0405	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,1856	1,5907	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,1175	1,4669	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,0049	2,9167	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Queb Plan 1 = CEB2
Int. Temp (°C) = Monho.dyr Plan 2 =
Dew point = Monho.dyr Plan 1 **Max. absorb.** :, kg/m² = 43,45
Leakage Area (NLA) (cm²/m²) = 1,0000 Plan 2 **Max. absorb.** :, kg/m² =

YEAR 1
WALL TYPE = LAV-3

MONTH	Plan 1 - kg/m² Conden	Evap	Drain	Absorb	Plan 2 - kg/m² Conden	Evap	Drain	Absorb
JUNE	0,0472	244032,9468	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JUL	0,0481	38800,7134	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
AUG	0,0644	313455,9310	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
SEP	0,1299	68562,4187	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
OCT	0,0399	178708,3521	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
NOV	0,0765	160227,7427	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
DEC	0,4576	257100,6255	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
JAN	0,8835	225700,7697	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
FEB	0,7417	166951,3815	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAR	0,2335	171499,3523	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
APR	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
MAY	0,0089	174177,7695	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Output for Montreal, Quebec
Int. Temp (°C) = Monho.dyr
Dew point = Monho.dyr
Leakage Area (NLA) (cm²/m²) = 1,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 **Max. absorb.** , kg/m² = 0,00
Plan 2 **Max. absorb.** , kg/m² =

Condensation Distribution
Air Leaks - Vapour Diffusion

WALL TYPE = LV-3

MONTH	Plan 1 - kg/m² LEAK	Diffusion	Total	HAFZ	HBFZ	Plan 2 - kg/m² LEAK	Diffusion	Total	HA
JUNE	0,0472	0,0000	0,0472	720	0	0,0000	0,0000	0,0000	0
JUL	0,0481	0,0000	0,0481	744	0	0,0000	0,0000	0,0000	0
AUG	0,0644	0,0000	0,0644	744	0	0,0000	0,0000	0,0000	0
SEP	0,1299	0,0000	0,1299	720	0	0,0000	0,0000	0,0000	0
OCT	0,0399	0,0000	0,0399	739	5	0,0000	0,0000	0,0000	0
NOV	0,0765	0,0000	0,0765	618	102	0,0000	0,0000	0,0000	0
DEC	0,4576	0,0000	0,4576	226	518	0,0000	0,0000	0,0000	0
JAN	0,8835	0,0000	0,8835	197	547	0,0000	0,0000	0,0000	0
FEB	0,7417	0,0000	0,7417	181	491	0,0000	0,0000	0,0000	0
MAR	0,2335	0,0000	0,2335	410	334	0,0000	0,0000	0,0000	0
APR	0,0000	0,0000	0,0000	697	23	0,0000	0,0000	0,0000	0
MAY	0,0089	0,0000	0,0089	744	0	0,0000	0,0000	0,0000	0

Table 39 Wall simulation LAV-3, exterior air space

YEAR 2
WALL TYPE = LAV-3

	Plan 1 - kg/m²				Plan 2 - kg/m²			
Mois	Conden	Évap	Drain	Absorb	Conden	Évap	Drain	Absorb
Jui	0,0472	244032,9468	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jul	0,0481	38800,7134	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Aoû	0,0644	313455,9310	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Sep	0,1299	68562,4187	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Oct	0,0399	178708,3521	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Nov	0,0765	160227,7427	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Déc	0,4576	257100,6255	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Jan	0,8835	225700,7697	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Fév	0,7417	166951,3815	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mar	0,2335	171499,3523	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Avr	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Mai	0,0089	174177,7695	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000

Sortie pour Montreal, Quebec
Temp int (°C) = Monho.dyr
Point de rosée = Monho.dyr
Aire de la fuite (cm²/m²) = 1,0000

Plan 1 = Exterior Air Space
Plan 2 =
Plan 1 absorb max, kg/m² = 0,00
Plan 2 absorb max, kg/m² =