Annexure-0004

GROUNDWATER BASELINE & QUALITY REPORT

Strictly confidentiel

samta mines

Client
SAMTA MINES.

Operator
SAMTA METALS & ALLOYS S.A

Typology
Projet de construction d'une unité industrielle de production de métaux.

Localisation
ATLANTIC FREE ZONE de KENITRA.

CASABLANCA, 05/01/2024

EL ADDAD
Bureau d'étude technique agréé

Bureau D'études Techniques Agrée

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EXCLUSIVE CONSTRUCTIONS
INGENIERIE, CONSEILS ET EXPERTISE

SUMMARY

I. MISSIONS BUREAU D'ETUDES

1. Champs d'intervention

Objet

*La société **SAMTA MINES** nous a demandé de procéder à l'étude d'impact sur l'environnement de son projet dit « **SAMTA METALS & ALLOYS – UNITE INDUSTRIELLE DE PROCUDTION DE METAUX** », situé à la zone franche de Kenitra « ATLANTIC **FREE ZONE** ».*

Expertise and environmental impact assessment

We limit ourselves to drawing up our expert reports on our experience in environmental impact assessments and on the basis of any reports provided by our approved collaborators and experts in the quality control of environmental components and analyses (ambient air; Groundwater, etc.). Consequently, the assessment of the condition, conditions or projections is made under the following conditions:

- ***Site visits,***
- ***Mobilization of the analysis laboratory in terms of qualified equipment and human resources,***
- ***Geographical location of sampling points,***

- ***The taking of groundwater samples, including 02 taken using core drilling tools (drilling), and 1 comparison sample taken from a well that can be exploited by the AFZ services (irrigation of green spaces).***
- ***Review of documents provided by the analysis laboratory***
- ***Interpretation and verification of results within the relevant normative framework,***
- ***Conclusion and summary of references and regulations.***

Independence – Conflicts of interest

We have not identified any conflicts of interest regarding the mission you have entrusted to us.

Limitation of use and right of communication

Our report is drawn up solely within the framework of the operation mentioned above. It cannot therefore be used for other purposes, or communicated to third parties, without the prior authorization of the BET

Limit of liability

Since the data must be evaluated based on the results, hypotheses or conclusions provided by the client, environmental experts or approved analysis laboratories, our liability cannot under any circumstances be engaged before any court.

Ownership and distribution of our reports

Our reports become the property of our clients upon full payment of our fees, subject to any usage limitations defined below. Our reports may only be distributed to third parties in their entirety, including annexes, unless our company's agreement to the distribution of extracts is obtained. They may neither be cited nor mentioned to third parties in any document intended to be published without the written consent of the BET, as to the form and circumstances in which they may appear.

Planes and Surfaces

We carry out our evaluations based on the surface areas of the land and buildings as they result from the information and documents provided to us (subject to verification and certification by an expert surveyor). We do not carry out any tests if this service is not included in our mission letter.

Property titles

Our mission does not include the examination of property titles, nor the control of the compliance of existing buildings with the legislation on Building Permits. Our conclusions therefore assume that the goods are in a legal situation with regard to the laws and regulations in force.

Lack or non-communication of information

It is the client's responsibility to provide us with all the relevant information necessary for our expertise.
If, for example, no modification, easement or hidden defect likely to disturb the envelope of the appraised works is reported to us, we presume its absence.

Use of data or documents communicated by the customer

Our intervention consists of identifying in these data or documents the information relevant to our evaluation. We do not carry out a full reading of the documents communicated, and even less an audit of these documents, the responsibility of which falls to other professionals.

References

- *Project to extend the Calcium carbonate production unit: Installation of the new production line, ZI Nouaceur /SAPINO; Province of Nouaceur, commune of OULAD AZZOUZ, Grand CASABLANCA.*
- *Project to extend the operation of an open-air quarry for the extraction of limestone rocks, presented by the Company, CARBONATE BEN AHMED, SARL, Municipality of Ain Dorbane Lahlaf, Province of Settat, Casablanca-Settat Region.*
- *Project to build the wastewater treatment plant in the center of Ouled Farès,*

- *Project to extend the operation of an open-air quarry for the extraction of limestone rocks (Ard Trik), presented by the Company YAJABI ET JAMAL, Municipality of Ain Dorbane Lahlaf, Province of Settat, Casablanca-Settat Region.*

- *Project to extend a food product production unit (biscuits, wafers, and sponge cake), Commune of Had Soualem, Province of Settat, Casablanca-Settat Region.*

- *Project to extend the operation of an open-air quarry for the extraction of limestone rocks (Blad Talaa), presented by the Company CARBONATE CHAOUIA, Municipality of Sidi Dahbi, Province of Settat, Casablanca-Settat Region.*

- *Carrying out an environmental assessment according to the terms of reference of law 49-17, of the project of the company Varun Beverages (PEPSI).*

- *Carrying out an environmental assessment according to the terms of reference of law 49-17, of the ALHALABI FOODS manufacturing unit project (AlHalabi foods industries and Trade).*

- *Production of an annual report for the year 2021 on the environmental situation of the shale extraction quarry by La Société Ciments de l'Atlas (CIMAT).*

- *Project to create a poultry slaughtering and white meat processing unit in the territorial commune of Settat.*

- *Carrying out (10) environmental impact studies of service stations and hydrocarbon distribution.*

Intervention teams

- *Ms. Fatima Zahra HIMRI: State engineer expert in Environment and Water engineering: 12 years of experience.*
- *Ms. Soukaina BARAKKAT: State engineer in environmental and climatic engineering: 11 years of experience.*
- *Mr. Adnane BENBARAKA: State engineer in water and environmental engineering: 13 years of experience.*
- *Mr. Zouhair FARHAT: State engineer in energy and environmental engineering: 07 years of experience.*
- *Mr. Mounaim EL ADDAD: State engineer in civil engineering, buildings and public works: 15 years of experience.*
- *Mr. Nacim ABDI: Professor and State Engineer in civil engineering, buildings and public works: 15 years of experience.*
- *Mr. Youssef CHELHAOUI: Modelling Manager and Weather Forecaster: 10 years of experience*

II. GROUNDWATER STATUS AND QUALITY STUDY

1. PROCEDURE AND APPROACH OF THE INTERVENTION

The office carried out the studies and analyses using the following approach:

- *Establishment of a specialized unit for the verification and sampling of groundwater status by means of a drilling machine.*
- *Positioning of the sampling team on two different* ***points A and B***
- *Samples were taken from depths that varied according to the detection of the water table (high depth soil moisture):* ***A = 23 m depth. B= 34 m depth.***
- ***Sample C*** *carried out in the vicinity of the plant's project right-of-way from an operational well that can be exploited by the AFZ services for irrigation work on green spaces.* ***C= 17 m depth.***
- *Sample processing by our approved analytical laboratory.*

Sampling and measurements were carried out in accordance with the most widely used procedures and reference methods worldwide.

The parameters measured are:

- *Calcium ;*
- *Magnésium ;*
- *Chlorure ;*
- *Sodium ;*
- *pH ;*
- *Solides dissous (TDS) ;*
- *Oxygène dissous ;*
- *Conductance spécifique (SC).*
- *Arsenic ;*
- *Benzène ;*
- *Fer.*

The environmental design office proceeded to set up the sampling campaign (sounding machine accompanied by a piezometer in order to detect the level of the water table. The sampling tests were carried out in 2 separate missions:

- ***Mission 1:*** *01 drill point and retrieve a sample from the groundwater flow.*
- ***Mission 2 :*** *take 02 samples, the first from an existing well near by the project site operated by the Atlantic Free Zone services for the irrigation of green spaces and a second one for verification and comparison.*

The samples collected were transferred to the analysis laboratory in order to carry out the verifications requested by the client.

AGQ Labs *is a chemical technology center with a strong international presence that, through its analytical laboratories, advanced testing and specialized chemical engineering, offers quality solutions and services tailored to the agronomy, food, environmental, health, industrial and mining sectors. It effectively combines technology (analytical chemistry) with specialized industry knowledge.*

The measurement points to be carried out are characterised by the following coordinates:

SAMPLING POINTS	COORDINATES
A (SONDAGE 01)	X : 34.300398, Y : -6.395995
B (SONDAGE 02)	X : 34.300369, Y : - 6.396101
C (EXISTANT WELL)	X : 34.30037, Y : - 6.393766

1. Results of on-site ambient air quality tests

a. Regulatory Titles and Normative Thresholds

The regulatory aspect is managed by the Moroccan standard NM 03.7.001 v2020 on the quality of water for food use initiated by decision of the Director of the Moroccan Institute for Standardization No. 982-20 of March 12, 2020, published in B.O No. 6874 of April 16, 2020. This standard cancels and replaces NM 03.7.001 certified in 2006. This standard is in broad technical agreement with the following references:

- *Directives de Qualité pour l'Eau de boisson de l'OMS, 4ème édition, 2017.*
- *Directive Européenne 98/83 CE du 03/11/1998 concernant la qualité des eaux destinées à la boisson.*

The following table summarises these limit values (the substances covered by this quality and reference status study):

SUBSTANCES	NATURE OF THE THRESHOLD	LIMIT VALUES TECHNICAL DETECTION	MOROCCAN CODE	REFERENCES
CALCIUM		0,500 mg/l	Eau potable : 270 mg/l	▪ NM 03.7.001
MAGNESIUM		0,500 mg/l	Eau potable : 50 mg/l	▪ NM 03.7.021
CHLORURE	Substance indésirable et/ou pouvant donner lieu à des plaintes.	10 mg/l	750 mg/l	▪ NM 03.7.001
SODIUM		0,500 mg/l	Eau potable : 150 mg/l	▪ NM 03.7.001
PH	Substance indésirable et/ou pouvant donner lieu à des plaintes.	2,0	Entre 6.5 et 8.5	▪ ISO 10523
SOLIDES DISSOUS (TDS)		0,01 g/l	0,01 g/l	▪ NM 03.7.001
OXYGENE DISSOUS		0,01 mg/L O2		▪ NM EN 25813
CONDUCTANCE		70,0 µS/cm à 25 °C	2700 µS/cm à 20 °C	▪ NM 03.7.001

SPECIFIQUE (SC)				
ARSENIC	*Substance toxique*	***1 µg/l***	***10 µg/l***	▪ *NM 03.7.022*
BENZENE	*Substance organique (tableau 3)*	***1 µg/l***	***1 µg/l***	▪ *NM 03.7.001*
FER	*Substance indésirable et/ou pouvant donner lieu à des plaintes.*	***25,0 µg/l***	***0,3 mg/l***	▪ *NM 03.7.001*

b. General Definitions of Substances to be Tested

Chlorure :

Chlorides are present in large quantities in seawater (± 19 g/l). Their concentration in rainwater is approximately 3 mg/l. In groundwater, its concentration depends on the rocks it passes through. Soils polluted by the chemical industry are very rich in chlorides.

The maximum permissible concentration of chlorides in water intended for human consumption is 200 mg/l. It is from this concentration that we begin to feel the taste of chlorine. Chlorine is naturally eliminated through the urine, but an accidental overdose can cause vomiting.

pH :

pH (Hydrogen Potential) is a measure of the chemical activity of protons or hydrogen ions in solution. It is used to measure the acidity or basicity of a solution, such as natural waters, for example. A solution of pH=7 is neutral; pH< 7 is acidic and pH>7 is basic.

TDS total des solides dissous :

TDS (Total Dissolved Solids) is a value used to assess water quality. The unit of measurement for TDS is expressed in micrograms per litre or ppm (parts per million). It determines the total amount of organic and inorganic substances dissolved in a liquid.

The TDS meter measures the electrical conductivity of the liquid in question. The more ionized particles such as salts and minerals a water is concentrated, the higher the conductivity. On the other hand, TDS does not give an indication of the general quality of the water, as many pollutants and solid particles do not have a great influence on the conductivity of the water. What is tested here is mainly the amount of minerals.

Electrical conductivity:

The conductivity of water defines its ability to let electric current flow easily. Conductivity increases as the concentration of ions increases.

Dissolved solids represent a measure of total ions in water as a solution. The electrical conductivity is actually a representation of the concentration of TDS in this solution, the greater the degree of concentration of the dissolved solids, the more representative the electrical conductivity.

Oxygène dissous :

Dissolved oxygen is a measure of the concentration of free oxygen in the water column. This oxygen is released by organisms, aquatic plants, and algae during photosynthesis. It can also enter water through exchange with the atmosphere. In a steady-state ecosystem, there is enough oxygen released or transferred into the water to allow for decomposition and respiration. Dissolved oxygen levels depend on many factors: if the water is flowing or calm, if there are rocks or other obstacles over which water can flow, the temperature of the water and the depth.

Arsenic :

Arsenic is a naturally occurring element in the environment. It has several industrial applications. Arsenic can enter food through water, soil or air, and is found in low levels in various types of food.

Different chemical forms of arsenic are found in food:

- *Inorganic arsenic is most commonly found in fruit juices and rice*
- *Organic arsenic is mainly found in fish, shellfish and crustaceans.*

The toxicity of arsenic depends on its chemical form. Inorganic arsenic is more dangerous to human health than inorganic forms of arsenic. Long-term exposure (over many years or decades) to very high concentrations of inorganic arsenic is associated

with an increased risk of cancer and other adverse health effects.

Some workplaces are more exposed to arsenic, and without safety measures, workers are at risk. These industries include:

- *Glass production industries;*
- *Wood processing industries;*
- *Industries producing or using certain pesticides;*
- *Cast iron industries.*

Symptoms of arsenic poisoning can be acute, severe, and immediate or chronic. In the latter case, the damage to health extends over a longer period of time. A person who has taken the product is likely to show signs within the next 30 minutes. They include drowsiness, headache, confusion, and severe diarrhea. If inhalation was inhalation, Or if a small amount has been ingested, symptoms may take time to develop. As the disease progresses, the patient may experience seizures and the pigmentation of the nail may change. Signs of severe cases include:

- *The sensation of metallic taste in the mouth;*
- *Excess saliva;*
- *Difficulty swallowing;*
- *Blood in the urine and muscle cramps;*
- *Hair loss;*
- *Excessive sweating and vomiting.*

Long-term use of arsenic leads to complications including:

- *Cancer;*
- *Liver disease;*
- *Diabetes;*
- *Digestive difficulties;*
- *Nervous system complications such as loss of sensation in the limbs and hearing problems.*

Iron :

Iron is present in water in three forms: ferrous iron (Fe2+), ferric iron (Fe3+) and iron complexed with organic matter (organic acids) and mineral matter (silicates, phosphates, etc.). This complexed iron is often found in wells and surface waters: it gives them a yellow or brown color.

In well-aerated waters, ferrous iron is oxidized to ferric iron which precipitates in the form of hydroxide, Fe(OH)3. In groundwater, due to a lack of oxygen, iron remains in solution.

This level of 0.3 mg/L, if adhered to, appears to be too low to pose a health risk. Higher iron levels, on the other hand, could increase the risk of cardiovascular disease and cancer. For example, it is known that unabsorbed metal promotes the production of free radicals, the agents of cellular aging, in the colon. By reacting with the colonic flora, iron may behave as a risk factor for cancer.

Iron, in excessive quantities, is also implicated in several neurodegenerative diseases such as Alzheimer's and Huntington's Chorea. Reducing the amount of iron inside neurons reduces symptoms in patients suffering from one of these two diseases.

Finally, in animals, free iron interacts with aluminum and increases its neurotoxicity to the latter.

Sodium :

Sodium is a mineral salt that helps maintain the body's fluid and acid-base balance, as well as the transmission of nerve impulses and muscle contraction1. Softened water contains a little more sodium, but it doesn't impact taste or health.

Magnesium :

Before it is absorbed into the bloodstream, the first symptom of excess magnesium intake is diarrhea. "An excess of magnesium in the body can lead to neuromuscular symptoms with decreased osteotendinous reflexes and, in the extreme, muscle paralysis. This excess also leads to nausea and headaches."

For higher levels of magnesemia, "cardiovascular symptoms manifest as bradycardia (slowing of the heart) or low blood pressure (significant decrease in blood pressure), with potentially electrocardiogram abnormalities." If the excess magnesium is particularly high, toxic effects can be observed in the form of mental confusion, heart problems associated with severe kidney disorders.

At its extreme, hypermagnesemia can cause muscle weakness and trouble breathing. "In extreme cases, excess magnesium can lead to cardiac arrest."

Calcium :

The most important salt contained in natural water is calcium carbonate. Therefore, natural water sources subjected to even minor filtration, then attest to the same chemical composition in drinking water. Calcium, which is found everywhere in nature, plays a very important role in the body, constituting the main reservoir for the maintenance of a constant calcium value. In addition to bone remodeling, calcium ions are also involved in muscular contractility and cardiac disorders, the transmission of nerve impulses and the optimal development of coagulation processes.

157 diseases of a degenerative nature (osteoporosis, arthritis, certain forms of cancer, hypertension, cardiovascular diseases, muscle cramps, headaches, Alzheimer's disease, high cholesterol, gout, diabetes, eczema, lupus, etc.) have been reported as diseases caused by calcium deficiency, therefore, adequate calcium intake is very important for the whole body.

The mineral composition of drinking water becomes essential in modulating calcium homeostasis. Calcium in drinking water is a major quantitative and qualitative source, as well as its excellent bioavailability. The solvation of calcium ions (Ca2+) in the presence of hydroxide ions (OH-) in water has been demonstrated, so we find that the hydroxide ion (OH-) has major effects on the solvation structure of Ca2+ in water.

Benzene :

Benzene (C6H6) is a simple aromatic hydrocarbon that, at room temperature, is a colourless, volatile, highly flammable liquid. Benzene is relatively soluble in water and most organic solvents. It is not very concentrated in aquatic organisms. Its half-life in water varies between 1 hour and 720 days depending on whether it is surface water or groundwater or according to certain environmental conditions (e.g., seasons).

Benzene can come from natural sources, but they are negligible. Benzene is a naturally occurring component of crude oil and can be found in water through the infiltration of oil into the ground or through the flow of water through petroleum ore. Benzene can also be released into the air from gaseous emissions from volcanoes and forest fires.

Due to its high volatilization potential, benzene in surface water readily volatilizes into the atmosphere when it comes into contact with air, which is not the case in groundwater.

c. Results obtained during the sampling campaign

The results obtained during the sampling campaign are as follows:

1- Location A: Sample taken from a core drill hole (drilling)

Photo Sample A

The following table summarizes the results of sampling A (the substances subject to this quality and baseline study):

SUBSTANCES	ANALYSES LOCATION	LIMIT VALUES TECHNICAL DETECTION	RESULTS SAMPLE A	MOROCCAN CODE	OBSERVATIONS
CALCIUM	Spain	0,500 mg/l	206,1 mg/L	Safe water : 270 mg/l	▪ NM 03.7.001
MAGNESIUM		0,500 mg/l	23,98 mg/L	Safe water : 50 mg/l	▪ NM 03.7.021
SODIUM	Spain	0,500 mg/l	157,6 mg/L	Safe water : 150 mg/l	▪ NM 03.7.021
PH		2,0	7,03	Entre 6.5 et 8.5	▪ ISO 10523
CHLORURE	Morocco	10 mg/l	302 mg/L	750 mg/l	▪ NM 03.7.001
SOLIDES DISSOUS (TDS)		0,01 g/l	1,16 g/L	0,01 g/l	▪ NM 03.7.001
OXYGENE DISSOUS	Spain	0,01 mg/L O2	8,66 mg/L	Safe water : 6,5 – 8 mg/l	▪ NM ISO 5814 ▪ NM 03.7.090
CONDUCTANCE SPECIFIQUE (SC)	Morocco	70,0 µS/cm à 25 °C	1 999	2 700 µS/cm à 20 °C	▪ NM 03.7.001
ARSENIC	Spain	1 µg/l	< 1,00 µg/L	10 µg/l	▪ NM 03.7.022
BENZENE		1 µg/l	<0.300 ug/L	1 µg/l	▪ NM 03.7.001
FER		25,0 µg/l	63,1 µg/L	0,3 mg/l	▪ NM 03.7.001

NB : *The technical detection limit value means the ability of the analytical and detection methods and tools of the accredited laboratory to carry out the searches and identifications of the substances contained in the samples issued. Below these values, the identification of substances will be exceeded and substances will be considered negligible to non-existent.*

2- Location B: Sample taken from a core drill hole (drilling)

Photo Sample B.

The following table summarizes the results of sample B (the substances covered by this quality and baseline study):

SUBSTANCES	ANALYSIS LOCATION	LIMIT VALUES TECHNICAL DETECTION	RESULTS SONDAGE B	MOROCCAN CODE	REFERENCES
PH	Morocco	2,0	6,87	Entre 6.5 et 8.5	▪ ISO 10523
CHLORURE		10 mg/l	316 mg/l		▪ NM 03.7.001
SOLIDES DISSOUS (TDS)		0,01 g/l	1,15 g/L	0,01 g/l	▪ NM 03.7.001
CONDUCTANCE SPECIFIQUE (SC)		70,0 µS/cm à 25 °C	1 969	2 700 µS/cm à 20 °C	▪ NM 03.7.001
ARSENIC	Spain	1 µg/l	< 1,00 µg/L	10 µg/l	▪ NM 03.7.022
BENZENE		1 µg/l	<0.300 ug/L	1 µg/l	▪ NM 03.7.001

NB : *The technical detection limit value means the ability of the analytical and detection methods and tools of the accredited laboratory to carry out the searches and identifications of the substances contained in the samples issued. Below these values, the identification of substances will be exceeded and substances will be considered negligible to non-existent.*

3- Location C: Sample taken from an existing well that is operational and operated by the services of the AFZ zone (irrigation of green spaces)

Photo Sample C.

SUBSTANCES	*ANALYSES LOCATION*	*LIMIT VALUES TECHNICAL DETECTION*	*RESULTS* / *SONDAGE C*	*MOROCCAN CODE*	*REFERENCES*
PH	*Morocco*	*2,0*	*7.69*	*Entre 6.5 et 8.5*	▪ *ISO 10523*
CHLORURE		*10 mg/l*	*32,8 mg/l*		▪ *NM 03.7.001*
SOLIDES DISSOUS (TDS)		*0,01 g/l*	*0,28 g/l*	*0,01 g/l*	▪ *NM 03.7.001*
CONDUCTANCE SPECIFIQUE (SC)		*70,0 µS/cm à 25 °C*	*484*	*2700 µS/cm à 20 °C*	▪ *NM 03.7.001*
ARSENIC	*Spain*	*1 µg/l*	*< 1,00 µg/l*	*10 µg/l*	▪ *NM 03.7.022*
BENZENE		*1 µg/l*	*<0.300 µg/l*	*1 µg/l*	▪ *NM 03.7.001*

NB : *The technical detection limit value means the ability of the analytical and detection methods and tools of the accredited laboratory to carry out the searches and identifications of the substances contained in the samples issued. Below these values, the identification of substances will be exceeded and substances will be considered negligible to non-existent.*

2. Interpretation of the results in the normative framework

As part of the mission of the design office, and after having taken the necessary samples to better interpret the reference state of the groundwater of the site of the AFZ zone and precisely the land subject of the future industrial unit SAMTA METALS & ALLOYS, we first cite the results summarized as follows and whose ***verification thresholds have been taken in relation to the source of water intended for water production Drinking (as a guideline)****:*

Point	Calcium mg/l	Magnésium mg/l	Sodium mg/l	Fer µg/l	Oxygène dissous mg/l	pH	Chlorure mg/l	Conductivité électrique µS/cm à 20° C	TDS Solides dissous g/l	Arsenic µg/l	Benzène µg/l
A	206,1	23,98	157,6	63,1	8,66	7,03	302	1 999	1,16	< 1,00	<0,300
B	Non mesurés					6.87	316	1 969	1,15	Non mesurés	
C	Non mesurés					7.69	32.8	484	0.28	Non mesurés	
Limits Moroccan code	Eau potable : <50 mg/l	Eau potable : <50 mg/l	Eau potable : <150 mg/l	Eau potable : <0,3 mg/l	0,01 mg/L O2	Entre 6.5 et 8.5	750 mg/l	2 700 µS/cm à 20 °C	0,01 g/l	10 µg/l	1 µg/l
Note	OK	OK	OK	OK	OK	OK	OK	OK	NC	OK	OK

**A : sample A*
**B : sample B*
**C : sample C*
**NC : Non compliance.*

Comparison of the results of samples A, B and C analysed and summarized in the table above reveals the following:

- *A negligible difference in the acidity of the groundwater sampled with a variation between* ***6.87 and 7.69****;*
- *Remarkable differences in the presence of chloride, TDS, specific electrical conductivity explained by the difference in sampling point and extraction depth:*

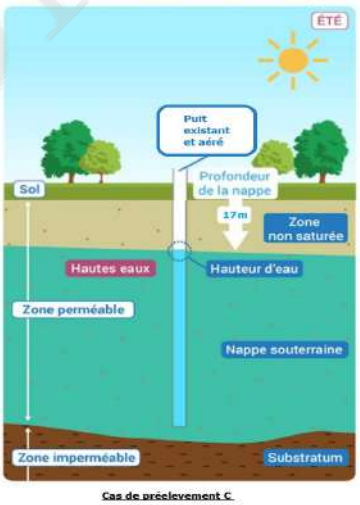
The level of a water table depends on the amount of water that enters the aquifer through infiltration, and the amount that leaves it, to aquatic environments or another aquifer.

There is therefore a recharge period (mostly autumn and winter) during which the water level in the aquifer rises.

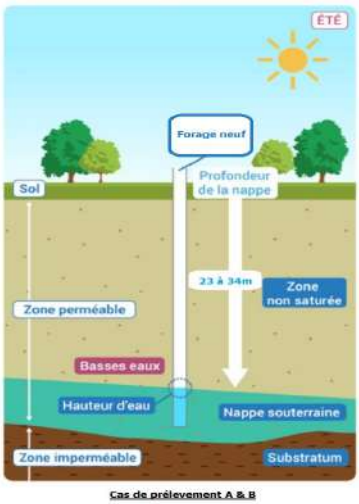
As soon as the recharge stops, the level drops as the water table continues to flow through the aquifer: this is the period when the water table is lowered. At the end of summer, the water table is at its lowest: this is the low groundwater level.

In our case, the sampling points are different in terms of depth:

- ***Point A: new borehole drilled by us: Pr=23m measured by a float.***
- ***Point B: new borehole drilled by us: Pr=34m measured by a float.***
- ***Point C: existing well built by the AFZ services: Pr=17m (caretaker-gardener info).***



Cas de prélèvement C



Cas de prélèvement A & B

- *These results indicate that the concentrations of chemicals such as **Calcium**, **Magnesium**, **Sodium** and **Iron** are well below the permissible limit for a source of water intended for the production of drinking water. However, there are no specific standards limiting the thresholds for these for other purposes such as use in agronomy, industry or any other activity.*

- *The results of this measurement campaign suggest that the quality of the extracted water with regard to **Benzene** and **Arsenic** is satisfactory and complies with the regulatory standards in force. However, it is important to continue to monitor benzene levels given the evolution of activity using mainly hydrocarbons in the processes of combustion, transport, etc.*

2. Conclusion

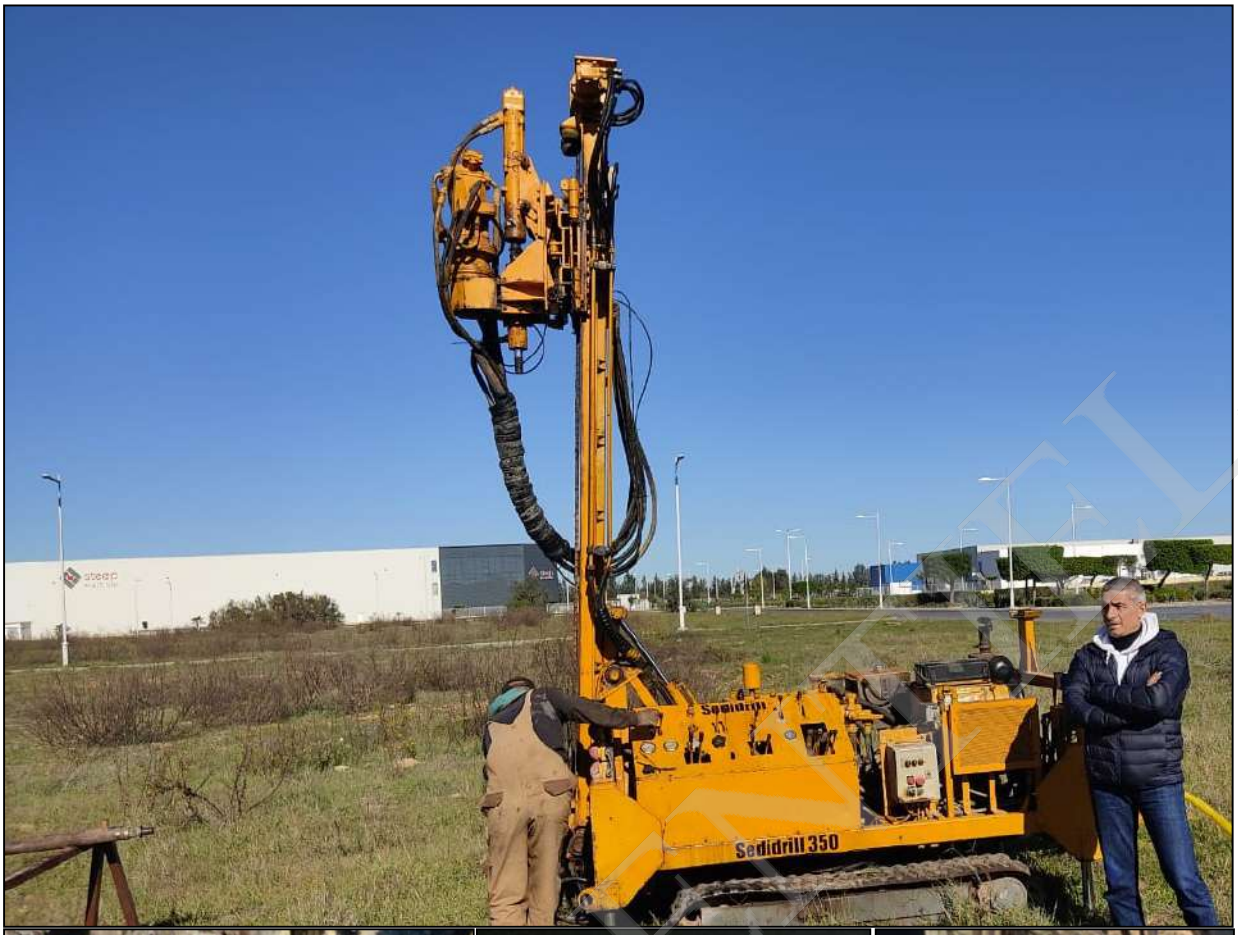
*As usual and on the basis of the analysis results provided by our approved control laboratory AGQ Labs, we may, unless the reference status is revised as of 30/12/2023, rule on the quality and reference status of groundwater in the area where the **SAMTA METALS & ALLOYS** industrial unit is located, in accordance with the standards and thresholds tolerated by Moroccan regulations.*

----------END

Visa
Environmental office

III. APPENDICES

1. Photo reporting


Sedidrill 350

2. Presentation of the Water Testing Laboratory

3. Groundwater Baseline Test Report

4. Excerpts from standards and reference titles

RAPPORT D'ANALYSE

Référence:	**A-23/163911**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-1	Centre d`analyse:	AGQ Labs	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	20/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	10/01/2024	Client tierce:	----
Déscription:	EAU SONDAGESOUTERRAINE				

Prélèvement:	19/12/2023	Prélevé par:	Client (^)
		Lot:	PA 20-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.

Inmaculada Otero Cifuentes

DATE D'ÉMISSION: 10/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

Référence:	A-23/163911	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SONDAGESOUTERRAINE	Date de la fin:	10/01/2024

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
Autres paramètres physico-chimique				
Oxígeno Disuelto	8,66	mg/L O2	-	

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Référence:	A-23/163911	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SOUTERRAINE	Date de la fin:	30/12/2023

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
Autres paramètres physico-chimique				
Oxígeno Disuelto	PE-304	Electrométrie		0,01 mg/L O2

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	**A-23/163912**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-2	Centre d`analyse:	AGQ Labs	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	20/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	10/01/2024	Client tierce:	----
Déscription:	EAU SONDAGESOUTERRAINE				

Prélèvement:	19/12/2023	Prélevé par:	Client (^)
		Lot:	PA 20-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.

M ª Jesus Gutierrez Solis

DATE D'ÉMISSION: 10/01/2024

CONCLUSION:

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	A-23/163912	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SONDAGESOUTERRAINE	Date de la fin:	10/01/2024

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
Composition chimique Cations				
Magnesio Total	23,98	mg/L	±15%	
Sodio Total	157,6	mg/L	±20%	
Métaux lourdes				
Arsenic Total	< 1,00	µg/L	±30%	10,0
Calcio Total	206,1	mg/L	±30%	
Fer	63,1	µg/L	±30%	

(*) Paramètre No accrédité par ENAC

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	A-23/163912	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SONDAGESOUTERRAINE	Date de la fin:	10/01/2024

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
Composition chimique Cations				
Magnesio Total	PE-303	Spect ICP-MS		0,5000 mg/L
Sodio Total	PE-303	Spect ICP-MS		0,5000 mg/L
Métaux lourdes				
Arsenic Total	PE-303	Spect ICP-MS		1,00 µg/L
Calcio Total	PE-303	Spect ICP-MS		0,5000 mg/L
Fer	PE-303	Spect ICP-MS		25,0 µg/L

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

TL- 487

Annule et remplace la version précédente : A-23/163914

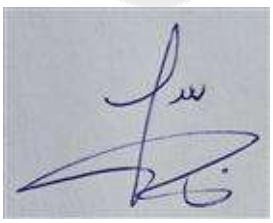
Référence:	**A-23/163914-M1**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	A-MC-0008	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	20/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	20/12/2023	Date de la fin:	29/12/2023	Client tierce:	----
Déscription:	EAU SONDAGE SOUTERRAINE				

Prélèvement:	19/12/2023	Prélevé par:	Client (^)
		Lot:	PA 20-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 29/12/2023

CONCLUSION:

Annule et remplace la version précédente : A-23/163914

Référence:	A-23/163914-M1	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SONDAGESOUTERRAINE	Date de la fin:	29/12/2023

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
Autres paramètres physico-chimique				
Conductivité électrique	1.999	µS/cm a 25 °C	-	2.700
pH	7,03		-	6,50 - 8,50

(&) Paramètre No accrédité par IAS TL-487

Annule et remplace la version précédente : A-23/163914

Référence:	A-23/163914-M1	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SOUTERRAINE	Date de la fin:	18/12/2023

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
Autres paramètres physico-chimique				
Conductivité électrique	PEC-002	Electrométrie		70,0 µS/cm a 25 °C
pH	PEC-001	Potenciometría pH		2,00

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	**A-23/163913**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-3	Centre d'analyse:	AGQ Labs	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d'échantillon:	EAU POTABLE	Date de Réception:	20/12/2023	Commande :	QMT-MA231200094
Début de l'analyse:	04/01/2024	Date de la fin:	10/01/2024	Client tierce:	----
Déscription:	EAU SOUTERRAINE				

Prélèvement:	19/12/2023	Prélevé par:	Client (^)
		Lot:	PA 20-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.

Sofia Rodriguez Sojo

DATE D'ÉMISSION: 10/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	A-23/163913	Type d'échantillon:	EAU POTABLE
Déscription:	EAU SOUTERRAINE	Date de la fin:	10/01/2024

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
BTEX				
Benceno	< 0,300	µg/L	±40%	

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(*) Paramètre No accrédité par ENAC

Los ensayos marcados con (*) no están amparados por la Acreditación de ENAC

Référence:	A-23/163913	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SOUTERRAINE	Date de la fin:	10/01/2024

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
BTEX				
Benceno	PE-621	Cromatog CG/MS P&T		0,300 µg/L

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

TL- 487

Annule et remplace la version précédente : A-23/163915

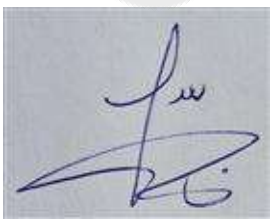
Référence:	**A-23/163915-M1**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-4	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	20/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	20/12/2023	Date de la fin:	29/12/2023	Client tierce:	----
Déscription:	EAU SONDAGESOUTERRAINE				

Prélèvement:	19/12/2023	Prélevé par:	Client (^)
		Lot:	PA 20-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 29/12/2023

CONCLUSION:

RAPPORT D'ANALYSE

Annule et remplace la version précédente : A-23/163915

Référence:	A-23/163915-M1	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SONDAGESOUTERRAINE	Date de la fin:	29/12/2023

RESULTATS ANALITIQUES

	Paramètre	Résultat	Unités	Incertitude	CMA
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	1,16	g/L	-	
	Composition chimique - Anions				
	Chlorure	302	mg/L	-	750

(&) Paramètre No accrédité par IAS TL-487

Annule et remplace la version précédente : A-23/163915

Référence:	A-23/163915-M1	Type d`échantillon:	EAU POTABLE
Déscription:	EAU SOUTERRAINE	Date de la fin:	18/12/2023

ANNEXE TECHNIQUE

	Paramètre	PNT	Technique	Ref. Norma.	LDT
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	PEC-002	Electrométrie		0,01 g/L
	Composition chimique - Anions				
	Chlorure	PE-336	Analizador de Flujo Continuo Segmentado		10,0 mg/L

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

CERTIFICATE OF ACCREDITATION

This is to attest that

AGQ MAROC SARL

N-152, ZONE INDUSTRIELLE
MOHAMMEDIA 20800, MOROCCO

Testing Laboratory TL-487

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories.* This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date September 6, 2022

President

Visit www.iasonline.org for current accreditation information.

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

AGQ MAROC SARL

www.agqlabs.ma

Contact Name Zakiya EL BAKKALI **Contact Phone** +212-661664173

Accredited to ISO/IEC 17025:2017 *Effective Date September 6, 2022*

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry	Pesticides Residues	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces	2,4,6 Trichlorophenol, Acetochlor, Acrinathrin, Alachlor, Aldrin, Amitraz (SP), Ametryn, Anthraquinone, Atrazine , Azinphos Ethyl, Azinphos Methyl, Benalaxyl (SP), Benfluralin, Bifenazate, Biphenyl, Bifenthrin, Bitertanol, Bromophos Methyl, Bromophos ethyl, Bromopropylate, Bupirimate (SP), Buprofezin, Captan, Carbaryl , Carbophenothion, Carbosulfan, Chlorfenson, Chlozolinate, Cyfluthrin, Cypermethrin, Cyproconazole , Cyprodinil, Chlorbenzilate, Chlordane Cis , Chlordane Trans , Chlorfenapyr, Chlorfenvinphos, Chloropropylate, Chlorothalonil, Chlorpyrifos Ethyl, Chlorpyrifos Methyl, Chlorpropham (SP), Chlorthal Dimethyl, Chlorotoluron, Coumaphos, Cyhalothrin Lambda, DDD-p,p'+DDT-o,p', DEET, Deltamethrin, Diafenthiuron, Diazinon, Dichlobenil, Diclobutrazole, Dichlofenthion, Dichlofluanide, Dicloran, Dichlorvos, Dicofol, Dicrotofos, Dieldrin (SP), Dielderin Sum, Diphenylamine, Difenoconazol, Diflufenican, Diniconazole , Dinobuton, Disulfuton, Disulfuton (Sum), Disulfuton Sulfone, Disulfuton Sulfoxide, Ditalimfos, Endosulfan Sum (A+B+Sulf), Endosulfan Alpha , Endosulfan Beta, Endosulfan Sulfate , Endrin, EPN, Ethalfluralin, Ethiofencarb, Ethion, Ethofumesate, Ethoprophos, Ethoxyquin-2, Etrimfos, Fenamiphos, Fenarimol, Fenazaquin, Fenitrothion,	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	Fenobucarb, Fenoxycarb, Fenpropathrin , Fenpyrazamine, Fensulfothion , Fenthion (SP), Phenthoate, Fenvalerate+Esfenvalerate, Flucythrinate, Fludioxonil, Fluopicolid, Fluopyram, Fluotrimazole, Fluquinconazole, Fluroxyoyr, Flusilazole, Flutriafol, Fluvalinate Tau, Folpet, Fonofos, Phosalone, Phosmet (SP), Fuberidazole, Furalaxyl, Heptachlor, Heptenofos Heptenophos, Hexaclorobenzene , Hexachlorobutadiene, Hexaconazole, Imazalil, Iprodione, iprovalicarb, Isazofos, Isofenphos Methyl, Isofenphos, Kresoxim Methyl, Lindane, Malathion, Mecarbam, Mepronil, Metacrifos, Metalaxyl, Metamidophos, Metazachlor , Metconazole, Methidathion, Methiocarb, Methiocarb sulfone, Methiocarb sulfoxide, Methoxyclor, Metribuzin, Mevinphos, Myclobutanil, Mirex, Molinate, Naled, Napropamide, Norflurazon, Nuarimol, P,P-DDT DDT, Ofurace, Phenylphenol-ortho , Oryzalin, Oxadiazon, Oxadixil, Oxyfluorfen, p,p-DDE, Paclobutrazol, Parathion Ethyl, Parathion Methyl (SP), Penconazole, Pendimethalin, Pentachloroaniline , Pentachloroanisole , Pentachlorobenzene, Penthiopyrad, Permethrin, Piperonyl Butoxide, Pyrazophos, Pyridaben, Pyridaphenthion, Pyrifenox, Pyrimethanil, Pirimicarb (SP), Perimiphos Ethyl, Perimiphos Methyl, Pyriproxyfen, Procloraz, Procymidone, Propham, Profenofos, Profluralin, Promecarb, Prometryn , Propachlor, Propargite , Propyzamide, Proquinazid, Pyraflufen Ethyl, Pyridalyl, Pyriproxifen, Prothiofos, Quinalphos, Chinomethionate, Quintozene, Quintozene Sum, saflufenacil,	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	Sethoxydim, Sulfoxaflor, Simazine, Sulfotep, Tebuconazole, Tebufenpyrad, Tecnazene, Tefluthrin, Terbacil, Terbufos,Terbufos Sulfone, Terbufos Sufoxide, Terbuthylazine, Terbutryn, Tetraclorvinfos, Tetraconazole, Tetradifon, Tetramethrin, Thiometon, Toclofos Methyl, Tolylfluanid (SP) , Transfluthrin, Triadimefon (SP), Triadimenol (SP),Triadimenol+Triadimefon, Tricyclazole, Triazophos, Trichlorfon, Trifluralin, Uniconazol-p , Vinclozolin (SP) , Zoxamide,4,4-Dichlorobenzophenone, 2,4-D, Abamectin, Acetamiprid (SP), Acephate, Aclonifen, Aldicarb, Aldicarb (Sum), Aldicarb Sulfone , Aldicarb Sulfoxide, azadirachtin, Azamethiphos, Azimsulfuron, Azoxystrobin , Bendiocarb, Benfuracarb, Benomyl-Carbendazim, Bentazone (SP), Bentazone methyl, Benthivalicarb, Bioallethrin, Boscalid, Bromacil , Bromuconazole, Bromoxynil , Butachlor, Butralin , Butoxycarboxim, Cadusafos, Captafol, Carbofuran (SP), Carbofuran-3-hidroxy, Carboxin, Carfentrazone ethyl, Chlorantraniliprole, Cyazofamid, Cycloate, Cycloxydim (SP) , Cymoxanil, Cymorazine, Clethodim, Clofentezine , Clomazone , Clopyralid, Chloridazon, Chlorfluazuron, Clothianidin (SP), Cyflufénamid, Cyflumetofen, Cyantraniliprole , Cyhexatin, Demeton-S-Methyl(SP), Demeton-S-Methyl Sulfone(SP), Desmedipham, Dialifos, Diclofop, Diclofop methyl, Dinotefuran, DNOC, Dichlormid, Dichlorprop, Diethofencarb , Diflubenzuron, Dimethoate (SP), Dimethoate Sum , Dimethomorph,Dinocap (SP), Dithianon, Diuron, Dodemorph, Dodine, Emamectin Benzoate, Epoxiconazole, Spinetoram,	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	Spinosad_2, Spirodiclofen, Spiromesifen, Spirotetramat, Spiroxamine, Ethiprole, Ethirimol, Etofenprox, Etoxazole, Famaxodane, Fenamidone, Fenbuconazole , Fenhexamid, Phenmedipham, Fenpyroximate, Fenpropidin, Fenpropimorph, Fention Sulfone, Fention Sulfoxide, Fipronil (SP), Fipronil Sulfone, Fipronil Sulfide, Flazasulfuron, Flonicamid (SP), Fluazinam, Fluazifop-p, Fluazifop-p-Buthyl, Fluazifop methyl, Flubendiamide, Flufenacet, Flufenoxuron, Fluometuron, Flutolanil, Phorate, Phorate (Sum) , Phorate Sulfone, Phorate Sulfoxide, Forchlorfenuron, Formetanate, Formothion, Fosthiazate, Furathiocarb, Haloxyfop methyl , Haloxyfop-2-ethoxyethyl , Haloxyfop-R,Hexaflumuron, Hexythiazox, Hymexazol, Imazamox, Imidacloprid (SP), Indaziflam, Indoxacarb, Ioxynil, Isocarbophos, Isoproturon, Isoxaben, Lenacil, Linurón, Lufenuron, Mandipropamid, MCPA Mepanipyrim , Meptyl Dinocap, Metaflumizone, Metamitron, Thiophanate Methyl (SP), Metolachlor , Metolcarb, Methomyl (SP) , Methomyl Suma, Methoxyfenozide, Metoxuron, Metrafenone, Milbemectin, Monocrotophos, Monolinuron, Nicosulfuron, Nitenpyram, Novaluron, Omethoate (SP), Oxadiargyl, Oxamyl, Oxycarboxin, Pencycuron, Phosphamidon, Picoxystrobin, Pymetrozine, Pyraclostrobin, Pyridate, Propamocarb, Propanil, Propaquizafop, Propiconazole, Propoxur, Prosulfocarb, Quinclorac, Quinmerac, Quinoxyfen, Quizalofop-Ethyl (SP), Rimsulfuron, Rotenone, Sulcotrione, Tebufenozide, Teflubenzuron, Thiamethoxam (SP), Thiamethoxam (Sum) , Thiabendazole, Thiacloprid ,	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	Thiocyclam, Thiodicarb (SP) , Triclopyr, Tridemorph, Trifloxystrobin, (SP) Triflumizole, Triflumuron, Triforine, Acibenzolar-S-Methyl, Ametoctradin, Amidosulfuron, Atrazine-Desisopropyl, Azaconazole, BAC nC-08, BAC nC-10, BAC nC-12, BAC nC-14, BAC nC-16, BAC nC-18, Benazolin, Bicyclopyrone, Bixafen, Butocarboxim sulfoxide, Buturon, Carbetamide, Carboxin Sulfoxide, Carfentrazone, Chlorbromuron, Chloroxuron, Chlorsulfuron, Chlorthiophos, Clethodim Sulfoxide, Cloransulam Methyl, Crimidine, Cyanazine, Cyclanilide, Cyenopyrafen, CyhalofopButhyl, Cyhexatin-Azocyclotin, DDAC nC-08, DDAC nC-10, DDAC nC-12, DDAC nC-14, Demeton-S-Methyl-Sulfoxide (Oxydemeton M, Diclosulam, Diflubenzuron, Dimefuron, Dimethenamid-P, DMA-amitraz metab, DMST, Edifenphos, Ethaboxam, Ethiofencarb sulfone, Ethiofencarb Sulfoxide, Fenamiphos Sulfone, Fenamiphos Sulfoxide, Fenbutatin oxide, Fenpiclonil, Fensulfothionoxon, Fensulfothionoxon sulfone, Fensulfothion sulfone, Fenthion oxon Sulfone, Fenthion oxon Sulfoxide, Fenthion Sulfone, Fenthion Sulfoxide, Fentin Acetate, Fenuron, Flamprop, Florasulam, Flufenacet ESA, Flufenacet OA, Fluoxastrobin, Flupyradifurone, Flurochloridone, FluroxypyrMeptyl, Fluxapyroxad, Foramsulfuron, Halosulfuron Methyl, Hexazinone, Imazapic, Imazapyr, Imazosulfuron, Iodosulfuron Methyl, Isoxaflutole, Isoxaflutole-Diketonitrile, Isoxathion, Ivermectine, Lactofen, Matrine, Mesosulfuron Methyl, Methabenzthiazuron, Methoprotryne, Metobromuron, Metsulfuron Methyl, Milbemycin A3 (Milbemectin), Milbemycin A4	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	(Milbemectin), Monuron, Neburon, Oxasulfuron, Oxathiapiprolin, Oxymatrine (Matrine deg), Phorate Oxon, Phorate Oxon Sulfone, Phorate Oxon Sulfoxide, Phosmet Oxon, Phoxim, Picloram, Picolinafen, Pinoxaden, Pirimicarb Desmethyl, Pirimicarb DesmethylFormamido, Prosulfuron, ProthioconazoleDesthio, Pyracarbolid, Pyraflufen, Sebuthylazine, Spirotetramat-Cis-Enol, Spirotetramat-Cis-keto-OH, Spirotetramat-Enol-Glucoside, Spirotetramat-Mono-OH, Sulfosulfuron, Tepraloxydim, TFNA, TFNG, Thidiazuron, Thiencarbazone-Methyl, Thifensulfuron Methyl, Thiobencarb, Thiofanox sulfone, Thiofanox sulfoxide, Tolfenpyrad, Triasulfuron, Triazoxide, Tricresyl Phosphate, Triflumizole FM-6-1, Triticonazole, Vamidothion, Metaldehyde, Atrazine desethyl, Beflubutamid, Bifenox, Bromocyclen, Chlormephos, Chlorthion, Cinidon Ethyl, Dicofol-2,4', Dimoxystrobin, Disulfoton sulfone, EPTC, Ethofumesate-2-keto, Fenchlorphos, Fenthion oxon, Flumetralin, Flurtamone, HCH-beta, HCH-delta, HCH-Epsilon, Heptachlor epoxide A (trans), Heptachlor epoxide B (cis), Heptenophos, Hydroxyquinoleine, 8-Iodofenphos, Iprobenfos, Isoprothiolane, Malaoxon, Mefenpyr Diethyl, Nitralin, Nitrofen, Nitrothal Isopropyl, Oxychlordane, Paraoxon Ethyl, Paraoxon Methyl, Propazine, Propetamphos, Silthiofam, Terbumeton, Terbuthylazine Desethyl, Tetrasul, Tri-Allate, Triamiphos, Trichloroanisole-2,4,6, 1,4-diméthylnaphtalène; 1-Naphthyl; Acétamide; Picaridine; Isofétamide; Isoxaflutol Metabolite RPA 203328; Nicotine; Valifénalate; Bifenazate-Diazene; Pyrethrin I; Pyrethrin II; Cinerin I; Cinerin II; Jasmolin I; Jasmolin II; Prochloraz metabolite	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Fruits, Vegetables, (fresh and transformed), Cereals, Aromatic Herbs and Graces (cont'd)	BTS 44595; Prochloraz metabolite BTS 44596; Dichlorprop-P(2.4 DP)	
			Chlorate	PE-690
			Perchlorate	PE-690
			Etephon	PE-690
			Glyphosate	PE-681
			AMPA	PE-681
			Fosétyl-Aluminium	PE-690
			Phosphonic acid	PE-690
			Fenbutatin Oxide	PE-6012
		Snails	2,4,6-Trichlorophenol, 2,4-DDE, 2-Phenylphenol, 4,4'-Dichlorobenzophenone, Acetochlor, Aldrin, Ametryn, Benalaxyl, Benfluralin, Bifenzate, Bifenthrin, Biphenyl, Bromopropylate, Bupirimate, Clordane Cis, Clordane trans, Chlorbenzilate, Chloropropylate, Chlorphenvinfos, Chlorpropham, Chlorpyrifos etvhyl, Chlortal dimethyl, Clozolinate, Cyfluthrin, Cypermethrin, Cyprodinil, DDD 4,4'+DDT2,4', DDE 4,4', DEET, Diazinon, Dichlobenil, Dichlofenthion, Dichloran, Diclobutrazol, Dicfol p,p', Dieldrin, Difenoconazol, Diflufenican, Diphenylamine, EPTC, Ethofumesate, Etridiazol, Etrimfos, Fenarimol, Fenazaquin, Fenitrothion, Fenpropathrin, Fenthion, Fenthoate, Fenvalerate+Esfenvalerate, Fluopicolide, Fluopyram, Fonofos, Furalaxyl, Heptachlor, Hexachlorobenzene, Iprodione, Iprovalicarb, Isazaphos, Isofenfos methyl, Kresoxim methyl, Lindane , Malathion, Mepronil, Metribuzin, Mirex, Molinate, Myclobutanil, Nuarimol, Oxadixyl, Pentachloaniline, Pentachlorobenzene, Permethrin, Phosalone, Piperonyl butoxide, Pirimicarb, Pirimiphos ethyl, Pirimiphos methyl, Prometryn,	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS Chromatography

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Food Chemistry (cont'd)	Pesticides Residues (cont'd)	Snails (cont´d)	Propachlor, Propyzamide, Pyridaben, Pyrimetanil, Pyriproxyfen, Quinalphos, Quinomethionate, Quintozene, Tebuconazole, Tefluthrin, Tetramethrin, Thiometon, Tolclofos methyl, Transfluthrin, Triadimenol, Trifluralin, Uniconazol, Bromophos Ethyl, Chlorfenson, Chlormephos, Pyrifenox II, Ethalfluralin	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS Chromatography (cont'd.)
	Organics	Fruits and Vegetables	Dithiocarbamates (as CS2)	PEC-0032, Determination of Dithiocarbamates by Ultraviolet Visible Spectrophotometry
Soil Chemistry	Pesticides Residues	Soil	Acetochlor; Aclonifen; Acrinathrin; Alachlor; Aldrin; Ametryn; Anthraquinone; Atrazine; Atrazine desethyl; Beflubutamid; Benalaxyl; Benfluralin; Bifenazate; Bifenox; Bifenthrin; Bitertanol; Bromocyclen; Bromophos ethyl; Bromophos Methyl; Bromopropylate; Bupirimate; Carbophenothion; Chinomethionat; Chlordane, Cis-; Chlordane, Trans-; Chlorfenapyr; Chlorfenson; Chlorfenvinphos; Chlormephos; Chlorobenzilate+Chloropropylate; Chlorothalonil; Chlorotoluron; Chlorpropham; Chlorpyrifos Ethyl; Chlorpyrifos Methyl; Chlorthal Dimethyl; Chlozolinate; Cinidon Ethyl; Coumaphos; Cyfluthrin; Cyhalothrin Lambda; Cypermethrin; Cyproconazole; Cyprodinil; DDD-o,p'; DDD-p,p'+DDT-o,p'; DDE-o,p'; DDE-p,p'; DDT-p,p'; Deltamethrin; Diazinon; Dichlobenil; Dichlofenthion; Diclobutrazol; Dicloran; Dicofol-4,4'; Dicrotophos; Dieldrin; Difenoconazole; Diflufenican; Dimefox; Dimoxystrobin; Diniconazole; Dinobuton; Diphenylamine; Disulfoton; Disulfoton sulfone; Disulfoton Sulfoxide; Ditalimfos; Endosulfan Sulfate; Endosulfan-Alpha; Endosulfan-Beta; Endrin; EPN; EPTC; Ethalfluralin; Ethion;	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Soil Chemistry (cont'd.)	Pesticides Residues (continued)	Soil (continued)	Ethofumesate; Ethofumesate-2-keto; Ethoprophos ;Etrimfos; Fenarimol; Fenazaquin; Fenchlorphos; Fenchlorphos Oxon; Fenitrothion; Fenpropathrin; Fenson; Fenthion; Fenthion oxon; Fenvalerate+Esfenvalerate; Flucythrinate; Flumetralin; Fluopicolide; Fluopyram; Fluotrimazole; Flurtamone; Fluvalinate-Tau; Fonofos; Furalaxyl; HCH-alpha; HCH-beta; HCH-delta; HCH-Epsilon; Heptachlor; Heptachlor epoxide A (trans) ; Heptachlor epoxide B (cis) ; Heptenophos; Hexachlorobenzene; Hexachlorobutadiene; Hexaconazole; Iodofenphos; Iprobenfos; Iprodione; Iprovalicarb; Isazofos; Isofenphos; Isofenphos Methyl; Isoprothiolane; Kresoxim; Methyl; Lindane (HCH-gamma); Malaoxon; Malathion; Mefenpyr; Diethyl; Mepronil; Metalaxyl; Methacrifos; Methidathion; Metribuzin; Mevinphos; Mirex; Molinate; Myclobutanil; Napropamide; Nitralin; Nitrofen; Nitrothal Isopropyl; Nuarimol; Ofurace; Oxadixyl; Oxychlordane; Oxyfluorfen; Paraoxon Ethyl; Paraoxon Methyl; Parathion Ethyl; Parathion Methyl; Penconazole; Pendimethalin; Pentachloroaniline; Pentachloroanisole; Pentachlorobenzene; Pentachlorobenzonitrile; Pentachlorophenol; Permethrin; Phenthoate; Phenylphenol-ortho; Phorate; Phosalone; Piperonyl Butoxide; Pirimiphos Ethyl; Pirimiphos Methyl; Procymidone; Profenofos; Profluralin; Prometryn; Propachlor; Propazine; Propetamphos; Propyzamide; Prothiofos; Pyrazophos; Pyridaben; Pyridaphenthion; Pyrimethanil; Pyriproxyfen; Quinalphos; Quintozene; Silthiofam; Simazine; Sulprofos; Tebuconazole;	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd.)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Soil Chemistry (cont'd.)	Pesticides Residues (continued)	Soil (continued)	Tebufenpyrad; Tecnazene; Tefluthrin; Terbacil; Terbumeton; Terbuthylazine; Terbuthylazine Desethyl; Terbutryn; Tetrachlorvinphos; Tetraconazole; Tetradifon; Tetramethrin; Tetrasul; Thiometon; Tolclofos Methyl; Transfluthrin; Triadimefon; Triadimenol; Tri-Allate; Triamiphos; Trichloroanisole-2,4,6; Trichlorophenol-2,4,6; Trifluralin; Uniconazole; Vinclozolin; 2,4-D; Abamectin; Acephate; Acetamiprid; Acibenzolar-S-Methyl; Aldicarb; Aldicarb Sulfone; Ametoctradin; Aminocarb; Atrazine-Desisopropyl; Azaconazole; Azamethiphos; Azimsulfuron; Azinphos Ethyl; Azinphos Methyl; Azoxystrobin; BAC nC-08; BAC nC-10; BAC nC-12; BAC nC-14; BAC nC-16; BAC nC-18; Benazolin; Benomyl-Carbendazim; Benthiovalicarb Isopropyl; Bicyclopyrone; Bixafen; Boscalid; Bromacil; Bromoxynil; Bromuconazole; Buprofezin; Butachlor; Butocarboxim sulfoxide; Butoxycarboxim; Butralin; Buturon; Cadusafos; Carbetamide; Carbofuran, 3-Hydroxy; Carboxin Sulfoxide; Carfentrazone; Carfentrazone Ethyl; Chlorantraniliprole; Chloridazon; Chloroxuron; Chlorthiophos; Clofentezine; Clomazone; Clothianidin; Crimidine; Cyanazine; Cyantraniliprole; Cyazofamide; Cyclanilide; Cycloate; Cycloxydim; Cyenopyrafen; Cyflufenamide; Cyflumetofen; Cyhalofop Buthyl; Cyhexatin-Azocyclotin; DDAC nC-08; DDAC nC-10; DDAC nC-12; DDAC nC-14; Demeton-S; Demeton-S-Methyl; Demeton-S-Methyl Sulfone; Demeton-S-Methyl-Sulfoxide (Oxydemeton M) ; Demeton-S-Sulfoxide; Desmedipham; Dialifos; Dichlormid; Dichlorvos; Diclosulam; Diethofencarb; Diflubenzuron;	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd.)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Soil Chemistry (cont'd.)	Pesticides Residues (continued)	Soil (continued)	Dimefuron; Dimethachlor; Dimethenamid-P; Dimethoate; Dimethomorph (E+Z); Dinotefuran; Diuron; DMST; DNOC; Dodine; Edifenphos; Emamectin Benzoate; Epoxiconazole; Ethiprole; Ethirimol; Etoxazole; Famoxadone; Fenamidone; Fenbuconazole; Fenbutatin oxide; Fenobucarb; Fenoxaprop-P-Ethyl; Fenoxycarb; Fenpiclonil; Fenpropimorph; Fenpyrazamine; Fenpyroximate; Fensulfothion; Fenthion oxon Sulfone; Fenthion oxon Sulfoxide; Fenuron; Fipronil; Fipronil Sulfide; Fipronil Sulfone; Flamprop; Flazasulfuron; Florasulam; Fluazifop Methyl; Fluazifop P; Fluazifop-P-Butyl; Flubendiamide; Fludioxinil; Flufenacet; Fluometuron; Fluoxastrobin; Flupyradifurone; Fluroxypyr; Fluroxypyr Meptyl; Flusilazole; Flutolanil; Flutriafol; Fluxapyroxad; Forchlorfenuron; Formothion; Fuberidazole; Halosulfuron Methyl; Haloxyfop methyl; Haloxyfop-2-Ethoxyethyl; Haloxyfop-R; Hexythiazox; Imazalil; Imazamox; Imazapic; Imazapyr; Imazosulfuron; Imidacloprid; Indoxacarb; Iodosulfuron Methyl; Ioxynil; Isocarbophos; Isoprocarb; Isoproturon; Isopyrazam; Isoxaben; Isoxaflutole; Diketonitrile; Isoxathion; Lactofen; Lenacil; Linuron; Mandipropamid; MCPA; ; Mepanipyrim; Meptyl-Dinocap; Metamitron; Metazachlor; Metconazole; Methabenzthiazuron; Methamidophos; Methiocarb; Methiocarb Sulfone; Methiocarb Sulfoxide; Methomyl; Methoprotryne; Methoxyfenozide; Metobromuron; Metolachlor; Metolcarb; Metoxuron; Metrafenone; Monocrotophos; Monolinuron; Monuron; Neburon; Nitenpyram; Norflurazon; Omethoate; Oryzalin; Oxadiazon; Oxamyl; Oxathiapiprolin; Oxycarboxin; Paclobutrazol;	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd.)

FIELDS OF TESTING		MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Soil Chemistry (cont'd.)	Pesticides Residues (continued)	Soil (continued)	Pencycuron; Penthiopyrad; Phenmedipham; Phorate Oxon; Phorate Oxon Sulfone; Phorate Oxon Sulfoxide; Phorate Sulfone; Phorate Sulfoxide; Phosmet; Phosmet Oxon; Phosphamidon; Phoxim; Picolinafen; Picoxystrobin; Pinoxaden; Pirimicarb; Pirimicarb Desmethyl; Prochloraz; Promecarb; Propachlor OA; Propamocarb; Propanil; Propaquizafop; Propargite; Propham; Propiconazole; Propoxur; Proquinazid; Prosulfocarb; Prothioconazole Desthio; Pymetrozine; Pyraclostrobin; Pyraflufen; Pyraflufen Ethyl; Pyridalyl; Pyridate; Quinclorac; Quinoxyfen; Quizalofop Ethyl; Rotenone; Saflufenacil; Sebuthylazine; Sethoxydim; Spinetoram; Spinosad; Spirodiclofen; Spiromesifen; Spiroxamine; Sulcotrione; Sulfosulfuron; Sulfotep; Sulfoxaflor; Tebufenozide; Teflubenzuron; Terbufos; Terbufos sulfone; Terbufos sulfoxide; TFNA; TFNG; Thiabendazole; Thiacloprid; Thiamethoxam; Thiencarbazone-Methyl; Thifensulfuron Methyl; Thiocyclam; Thiodicarb; Tolfenpyrad; Tolylfluanid; Triazophos; Triazoxide; Trichlorfon; TricresylPhosphate; Tricyclazole; Trifloxystrobin; Triflumizole; Triflumizole FM-6-1; Triforine; Triticonazole; Vamidothion; Zoxamide	PE-674, Determination of Pesticide Residues Determination by GC-MS/MS and LC-MS/MS Chromatography (cont'd.)
Microbiology		Food	Total Mesophilic Aerobic Count	NM ISO 4833 2008 NM.08.0.102
			Escherichia Coli Count	NM ISO 16649-2 2007 NM.08.0.164
			Coagulase Positive Staphylococci Count	NM ISO 6888-1 2008 NM.08.0.150
			Salmonella Investigation	NM ISO 6579-1 2017 IC.08.0.103
			Research of Listeria Monocytogenes	NM ISO 11290 2008 NM.08.0.172
			Total Coliform Count	NM ISO 4832 2008

FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Microbiology (cont'd.)	Food (cont'd.)		NM.08.0.115
		Fecal Coliform Count	NM. 08.0.124 2012
		Bacteria Sulfite Reducers Count	NM ISO 15213 2007 NM.08.0.159
		Mesophilic lactic bacteria	NM ISO 15214 (2007)
		Yeasts and moulds	NM 08.0.123 (2006)
		Enterobacteriaceae	NM ISO 21528-2 (2012)
		Bacillus Cereus	NM ISO 7932 (2009)
		Clostridium perfringens	NM ISO 7937:2009
	Water	Total Bacterial Count at 36°C	NM ISO 6222 2007 NM.03.7.005
		Total Bacterial Count at 22°C	NM ISO 6222 2007 NM.03.7.005
		Total Coliform Count	NM ISO 9308-1 2019 NM.03.7.003
		Thermotolerant Coliform Count	NM ISO 9308-1 2019 NM.03.7.003
		Escherichia Coli Count	NM ISO 9308-1 2019 NM.03.7.003
		Clostridia Count	NM ISO 6461-2 2007 NM.03.7.004
		Salmonella Investigation	NM ISO 19250 2012 NM.03.7.050
		Intestinal Enterococci Count	NM ISO 7899-2 2007 NM.03.7.006
		Coagulase Positive Staphylococci Count	NM 03.7.036 -2019
	Work place & Surfaces – swabs	Total Mesophilic Aerobic Count	Internal Method (PM-464) based on NM 08.0.102-2008 ISO 4833:2003
		Thermotolerant Coliform Count	Internal Method (PM-463) based on NM 08.0.124-2012 NF V 08-060/2009
		Yeasts and molds	PM-465
	Microbiological analysis of air	Total Mesophilic Aerobic Count	PM-409
		Yeasts and molds	PM-410

FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Chemistry	Water	Multielements in water by ICP-OES Boron, Calcium, Copper, Iron, Magnesium, Manganese, Sodium, Sulphate, Potassium, Zinc	PEC-009
		Turbidity in water by spectrometry	PE-317
		Total Suspended Matter in water by gravimetry	PE-307
		COD in water by spectrometry	PE-2032
		Nitrate (Sum) in water by UV-VIS spectrometry	PE-336
		Nitrate – by calculation	PE-336
		Nitrite in water by UV-VIS spectrometry	PEC-006
		Total Phosphorus in water by ICP-OES	PE-308
		Index of Permanganate in water by volumetric titration	PE-318
		pH in water using a pH meter	PEC-001
		Conductivity in water using a conductivity meter	PEC-002
		Kjeldahl Nitrogen in water by UV-VIS spectrometry	PE-341
		Free Chlorine in water	PE-340
		Color in water by UV-VIS spectrometry	PE-316
		Chlorides in water by UV-VIS spectrometry	PE-336
		Ammonium in water by UV-VIS spectrometry	PE-319
		BOD5 in water and wastewater	PE-305
		Determination of pH by Discrete Analyzer	PM-206
		Determination of Electrical Conductivity by Discrete Analyzer	PM-206
		Determination of Ammonium by Discrete analyzer	PM-203
		Determination of Chlorides by Discrete analyzer	PM-203
		Determination of Dissolved Oxygen	PIM-205
		Odor	PM-202
		Flavor	PM-201

FIELDS OF TESTING	MATERIAL/ MATRIX	DETERMINANT(S)/ ANALYTE(S)	METHOD REFERENCE
Chemistry (cont'd.)	Water (cont'd.)	Temperature	PIM-204
		Determination of Phosphorous by ICP-OES	PEC-009
	Soil	Determination of pH	PM 204
		Determination of Electrical Conductivity	PM 205
		Total Limestone	PE-327
		Nitrogen Dumas	PEC-034
		Exchangeable Potassium	PEC-009
		Phosphorus-Olsen	PM-206
		Organic Carbon	PM-207
		Copper, Iron, Manganese, Zinc	PEC-009
	Vegetation	Nitrogen Dumas	PEC-034
		Boron, Calcium, Copper, Iron, Potassium, Magnesium, Manganese, Molybdenum, Phosphorus, Sodium, Sulfates, and Zinc.	PEC-009
		Chloride	PE-336/PE-102

RAPPORT D'ANALYSE

TL- 487

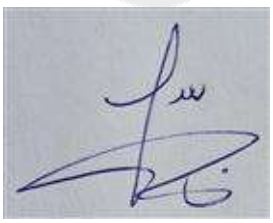
Référence:	**A-23/169031**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-4	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	27/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	04/01/2024	Client tierce:	----
Déscription:	EAU DE SONDAGE SOUTERRAINE				

Prélèvement:	26/12/2023	Prélevé par:	Client (^)
		Lot:	PA 27-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 04/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

TL- 487

Référence:	A-23/169031	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE SONDAGE SOUTERRAINE	Date de la fin:	04/01/2024

RESULTATS ANALITIQUES

	Paramètre	Résultat	Unités	Incertitude	CMA
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	1,15	g/L	-	
	Composition chimique - Anions				
	Chlorure	316	mg/L	-	750

Les Résultats de ce rapport concernent uniquement l`échantillon tel qu`il est reçu par ce laboratoire. Toute reproduction totale ou partielle du présent rapport, est strictement interdite sans l'autorisation écrite du laboratoire. Les incertitudes sont à la disposition des clients sur demande.

(&) Paramètre No accrédité par IAS TL-487

TL- 487

Référence:	A-23/169031	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE SONDAGE SOUTERRAINE	Date de la fin:	04/01/2024

ANNEXE TECHNIQUE

	Paramètre	PNT	Technique	Ref. Norma.	LDT
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	PEC-002	Electrométrie		0,01 g/L
	Composition chimique - Anions				
	Chlorure	PE-336	Analizador de Flujo Continuo Segmentado		10,0 mg/L

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

TL- 487

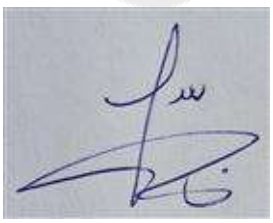
Référence:	**A-23/169038**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	A-MC-0008	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	27/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	04/01/2024	Client tierce:	----
Déscription:	EAU DE SONDAGE SOUTERRAINE				

Prélèvement:	26/12/2023	Prélevé par:	Client (^)
		Lot:	PA 27-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 04/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

Référence:	A-23/169038	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE SONDAGE SOUTERRAINE	Date de la fin:	04/01/2024

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
Autres paramètres physico-chimique				
Conductivité électrique	1.969	µS/cm a 25 °C	-	2.700
pH	6,87		-	6,50 - 8,50

(&) Paramètre No accrédité par IAS TL-487

TL- 487

Référence:	A-23/169038	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE SONDAGE SOUTERRAINE	Date de la fin:	04/01/2024

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
Autres paramètres physico-chimique				
Conductivité électrique	PEC-002	Electrométrie		70,0 µS/cm a 25 °C
pH	PEC-001	Potenciometría pH		2,00

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

DECISION D'AGREMENT ACCOMPAGNEE DE LA PORTEE

N° LA/01/2019

Conformément au code de procédure CP04/DIL/21 du 17/02/2021, le Directeur Général de l'Office National de Sécurité Sanitaire des Produits Alimentaires (ONSSA), atteste que le laboratoire AGQ, Sis à : 152, zone industrielle Sud-Ouest, 4ème étage-20800, MOHAMEDIA, a été agréé par l'ONSSA pour effectuer certaines analyses en microbiologie alimentaire et hydrique et en chimie alimentaire (Analyses de résidus de pesticides) figurant dans la portée ci-jointe.

Cet agrément est valable pour une durée de cinq ans.

Le laboratoire est tenu de respecter les critères figurant au point 2 du code de procédure d'agrément et notamment ceux relatifs au maintien des compétences et au respect des méthodes analytiques retenues par l'ONSSA.

Pour le Directeur Général de l'ONSSA
et par délégation
Le Directeur des Intrants et des Laboratoires

Signé : Dr. Nabil ABOUCHOAIB

Avenue Hadj Ahmed Cherkaoui, Agdal - Rabat,Maroc
شارع حاج أحمد الشرقاوي، أكدال - الرباط - المغرب
: + 212 5 37 67 65 00 / + 212 5 37 68 13 51 - : + 212 5 37 68 20 49
Centre de relations : 080 100 36 37
www.onssa.gov.ma

Portée d'agrément du laboratoire AGQ N° LA/01/2019

Domaine	Type	Intitulé de l'essai	Norme retenue
Hygiène des eaux d'élevage et d'agro-industrie	Microbiologie hydrique	Dénombrement des micro-organismes revivifiables dans l'eau à 36°C	NM ISO 62222007 NM.03.7.005
		Dénombrement des micro-organismes revivifiables dans l'eau à 22°C	NM ISO 62222007 NM.03.7.005
		Dénombrement des Coliformes Totaux dans les eaux. Méthode par Filtration sur membrane	NM ISO 9308-1 2019 NM.03.7.003
		Dénombrement d'*Escherichia Coli* dans les eaux Méthode par Filtration sur membrane	NM ISO 9308-1 2019 NM.03.7.003
Hygiène alimentaire	Microbiologie des aliments	Recherche du *Salmonella spp.* dans les aliments. Méthode Horizontale	NM ISO 6579 2017 NM.08.0.103
		Dénombrement des Coliformes Totaux Méthode Horizontale Méthode de Comptage de Colonies	NM ISO 48322008 NM.08.0.115
	Chimie Alimentaire/ Analyses physicochimiques des produits alimentaires (Analyses de résidus de pesticides) : *Produits riches en eau : Légume-fruit/ Cucurbitacées*	***Détermination des résidus de pesticides par chromatographie en phase gazeuse couplée à la spectrométrie de masse***	***PE-674 GC-MS/MS***
	-Produits à haute teneur en huile et teneur en eau intermédiaire : fruits et produits oléagineux. *-Céréales* *-Menthe*	***Détermination des résidus de pesticides par chromatographie en phase liquide couplée à la spectrométrie de masse***	***PE-674 LCMS/MS***
	Chimie Alimentaire/Analyses physicochimiques des produits alimentaires : *Légumes-fruits /cucurbitacée et agrumes.*	***Détermination des résidus de Dithiocarbamates-Méthode Spectrophotométrie UV-VISIBLE***	***PEC-0032 UV-Visible***

*** Les analyses objet de la présente portée devront répondre continuellement aux nouvelles versions des normes accordées et être accréditées.**

Editée le : 09/07/2019
Mise à jour le 29/07/2021 et le 02/06/2022 suite à la veille normative ***et le 26/ 08 /2022 suite à l'extension d'agrément.***
Valable jusqu'au : 08/07/2024.

Pour le Directeur Général de l'ONSSA
et par délégation
Le Directeur des Intrants et des Laboratoires
Signé : Dr. Nabil ABOUCHOAIB

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RAPPORT D'ANALYSE

TL- 487

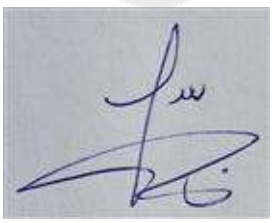
Référence:	**A-23/169027**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	A-MC-0008	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	27/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	04/01/2024	Client tierce:	----
Déscription:	EAU DE PUIT				

Prélèvement:	26/12/2023	Prélevé par:	Client (^)
		Lot:	PA 27-12-2023

Vous pouvez consulter toute information en relation avec les éssais dans le présent rapport d'analyse.

Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 04/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

Référence:	A-23/169027	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE PUIT	Date de la fin:	04/01/2024

RESULTATS ANALITIQUES

Paramètre	Résultat	Unités	Incertitude	CMA
Autres paramètres physico-chimique				
Conductivité électrique	484	µS/cm a 25 °C	-	2.700
pH	7,69		-	6,50 - 8,50

Les Résultats de ce rapport concernent uniquement l`échantillon tel qu`il est reçu par ce laboratoire. Toute reproduction totale ou partielle du présent rapport, est strictement interdite sans l'autorisation écrite du laboratoire. Les incertitudes sont à la disposition des clients sur demande.

(&) Paramètre No accrédité par IAS TL-487

Référence:	A-23/169027	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE PUIT	Date de la fin:	04/01/2024

ANNEXE TECHNIQUE

Paramètre	PNT	Technique	Ref. Norma.	LDT
Autres paramètres physico-chimique				
Conductivité électrique	PEC-002	Electrométrie		70,0 µS/cm a 25 °C
pH	PEC-001	Potenciometría pH		2,00

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.

RAPPORT D'ANALYSE

TL- 487

Référence:	**A-23/169029**	Enregistré à:	AGQ Maroc	Client:	EXCLUSIVE CONSTRUCTIONS
Analyse:	MA01-00013709-4	Centre d`analyse:	AGQ Maroc	Domicile:	10 Rue Liberté Etg 3 N 5 C/o Ca Al Hiba
Type d`échantillon:	EAU POTABLE	Date de Réception:	27/12/2023	Commande :	QMT-MA231200094
Début de l`analyse:	04/01/2024	Date de la fin:	04/01/2024	Client tierce:	----
Déscription:	EAU DE PUIT				

Prélèvement:	26/12/2023	Prélevé par:	Client (^)
		Lot:	PA 27-12-2023

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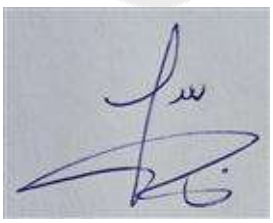
Législation: NM.03.7.001-2006 EVALUATION DE LA CONFORMITÉ LEGALE

En suivant le protocole repris dans notre manuel de qualité, AGQ gardera l'échantillon sous des conditions contrôlées durant une période de 15 jours après la fin de l'analyse. Après cette période, l'échantillon sera éliminé. Si vous désirez une information complémentaire, n'hésitez pas à nous contacter.



Youssef Rachidi

DATE D'ÉMISSION: 04/01/2024

CONCLUSION:

RAPPORT D'ANALYSE

Référence:	A-23/169029	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE PUIT	Date de la fin:	04/01/2024

RESULTATS ANALITIQUES

	Paramètre	Résultat	Unités	Incertitude	CMA
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	0,28	g/L	-	
	Composition chimique - Anions				
	Chlorure	32,8	mg/L	-	750

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Référence:	A-23/169029	Type d`échantillon:	EAU POTABLE
Déscription:	EAU DE PUIT	Date de la fin:	04/01/2024

ANNEXE TECHNIQUE

	Paramètre	PNT	Technique	Ref. Norma.	LDT
	Autres paramètres physico-chimique				
&	TDS Total des Solides Dissous	PEC-002	Electrométrie		0,01 g/L
	Composition chimique - Anions				
	Chlorure	PE-336	Analizador de Flujo Continuo Segmentado		10,0 mg/L

(1) L'intervalle minimale correspond à la limite de détermination, à partir de laquelle nous quantifions.