

TYPE OF ANALYSIS: PHYSICAL AND CHEMICAL

Matrix : soils, sludge, mud, sediments, solid waste and leaching materials, chemicals and solid fertilizers, AUS32, foliar and fresh plant material, food

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Soils	All those included in the list of models and determinations	2 or 3 kg (if including coarse fraction)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	1 month Ambient temperature	ZE3
Soils	All those included in the list of models and determinations	1 or 2 kg (if not including coarse fraction)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	1 month Ambient temperature	ZE3
Sludge, mud, sediment, solid waste and leaching materials	All those included in the list of models and determinations	1 or 2 kg	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	12 hours from sampling to refrigeration, and a maximum period of 7 days for the start of tests.	Refrigeration temperature	Refrigeration temperature	Raw sample: 1 month to Ambient temperature. Processed sample: 1 month to Ambient temperature. Other: Consult Technical Director	ZE3

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Chemicals and solid fertilizers	All those included in the list of models and determinations	100 or 200 g (preferably homogeneous)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	7 days	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	60 days Ambient temperature	ZE5 ZE4
Chemicals and liquid fertilizers	All those included in the list of models and determinations	100 or 200 ml (preferably homogeneous)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	60 days Ambient temperature	ZE6
AUS32	All those included in the list of models and determinations	1 l	High-density polyethylene	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	1 week Ambient temperature	ZE6
Foliar and fresh plant material	All those included in the list of models and determinations	100 or 200 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	24 hours from sampling to refrigeration, and a maximum period of 4 days for the start of tests.	Refrigeration temperature	Refrigeration temperature	Fresh: 1 week Dry: 1 month	ZE1 ZE(0)1
Foliar and dry plant material	All those included in the list of models and determinations	10 or 20 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	1 month Ambient temperature	ZE1 ZE(0)1

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Food (metals)</i>	<i>All those included in the list of models and determinations</i>	200 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	Products with low moisture content: 10 days. Preserves: 30 days . Fresh products: 5 days in refrigeration. Frozen: 30 days in frozen.	Room temperature: Low moisture content products and preserves. Refrigeration temperature: Fresh products. Freezing temperature: Frozen products.	Ambient temperature: Low moisture content products. Refrigeration temperature: Fresh products and preserves once opened. Freezing temperature: Frozen products.	Low moisture content products at room temperature: 1 month. Original display of fresh produce, opened preserves and defrosted products at refrigeration temperature: 1 week. Homogenized frozen food: 1 month.	ZE(0)10 ZE(-0)10
<i>Food (other parameters)</i>	<i>All those included in the list of models and determinations</i>	500 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	Products with low moisture content: 10 days. Preserves: 30 days. Fresh products: 5 days in refrigeration. Frozen: 30 days in frozen.	Room temperature: Low moisture content products and preserves. Refrigeration temperature: Fresh products. Freezing temperature: Frozen products.	Ambient temperature: Low moisture content products. Refrigeration temperature: Fresh products and preserves once opened. Freezing temperature: Frozen products.	Low moisture content products at room temperature: 1 month. Original display of fresh produce, opened preserves and defrosted products at refrigeration temperature: 1 week. Homogenized frozen food: 1 month.	ZE(0)10 ZE(-0)10

Matrix : waters

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
Oils and fats	V	1000 ml	HCl (pH 1 – 2). Fill the container to 90%, leaving headspace.	1 month	UNE EN ISO 5667-3
Haloacetic acids	GOES	60 ml without headroom	Cooled. 80 mg thiosulfate / 1L of sample	3 days	UNE EN ISO 23631
Alkalinity	POV	200 ml, container completely full	Cooled	14 days	UNE EN ISO 5667-3
Ammonium	POV	200 ml 0.45µm in situ filtration	Cooled	1 day	UNE EN ISO 5667-3
			Cooled H ₂ SO ₄ (pH 1 – 2)	21 days	
			Frozen	1 month	
Anions (Chloride, Sulfate and Bromides)	POV	60 ml	Cooled	1 month	UNE EN ISO 5667-3
Bisphenol A (BPA)	GOES	100 ml	Cooled. 80 mg thiosulfate / 1L of sample	14 days	UNE EN 18857-2
Boron	P	100 ml	Cooled HNO ₃ (pH <2)	1 month	UNE EN ISO 5667-3
Bromate	POV	60 ml	Refrigeration 50 mg/L ethylenediamine	28 days	EPA METHOD 317.0
Total organic carbon	POV	60 ml	Refrigerated in darkness	Day 2	UNE EN ISO 5667-3
			Cooled H ₂ SO ₄ (pH 1 – 2)	8 days	
			Frozen	1 month	
Cations (Calcium, magnesium, sodium and potassium) Hardness	POV	60 ml	Cooled	1 month	UNE EN ISO 5667-3
Total cyanides	POV	100 ml	Cooled NaOH (pH > 12)	14 days	UNE EN ISO 5667-3
Chlorates	POV	100 ml	Cooled NaOH (pH 9.5 – 10.5)	14 days	UNE EN ISO 10304-4

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
Chlorites	POV	100 ml	Cooled NaOH (pH 9.5 – 10.5)	28 days	UNE EN ISO 10304-4
Residual chlorine	P or VA	25 ml	Analyze on site	5 min	UNE EN ISO 5667-3
Chlorophyll	POV	1000 ml	Refrigeration	1 day	UNE EN ISO 5667-3
			Refrigerated extract	3 days	
Vinyl chloride	GOES	200 ml	Cooled 80 mg thiosulfate / 1L of sample	5 days	UNE EN ISO 5667-3
Color	P or VA	100 ml	Refrigerated in darkness	5 days	UNE EN ISO 5667-3
Volatile organic compounds	GOES No headroom	200 ml	Cooled 80 mg thiosulfate / 1L of sample	5 days	UNE EN ISO 5667-3
Conductivity	POV	100 ml	Preferably on site Cooled	1 day	UNE EN ISO 5667-3
Chromium VI	POV	100 ml	Cooled	4 days	UNE EN ISO 5667-3
			Refrigerated Ammonium sulfate buffer (pH 9.3 – 9.7)	28 days	SM 1060
DBO5	P o V	1000 ml	Refrigerated	1 day	UNE EN ISO 5667-3
	V		Frozen in darkness	1 month 6 months (>50 mg O ₂ /l)	
DQO	P o V	100 ml	Refrigerated H ₂ SO ₄ (pH 1 – 2)	6 months	UNE EN ISO 5667-3
	V		Frozen in darkness		
Total phenols	GOES	100 ml	Cooled H ₂ SO ₄ (pH 1 – 2)	21 days	UNE EN ISO 5667-3
Fluoride	P	100 ml	Cooled	1 month	UNE EN ISO 5667-3
Phosphate	POV	100 ml	Filter 0.45µm in situ Cooled	1 day	UNE EN ISO 5667-3
Phosphorus	POV	100 ml	Cooled HNO ₃ (pH <2)	1 month	UNE EN ISO 5667-3

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
Hydrocarbons	V	1000 ml	HCl (pH 1 – 2). Fill the container to 90%, leaving headspace.	1 month	UNE EN ISO 5667-3
Polycyclic aromatic hydrocarbons (PAHs)	See Pesticides and semi-volatile compounds				
Iron (II)	POV	60 ml	Cooled HCl (pH 1 - 2)	7 days	UNE EN ISO 5667-3
Mercury	POV	60 ml	Cooled HNO ₃ (pH <2)	28 days	SM 1060
Metals (except mercury)	POV	60 ml	Cooled HNO ₃ (pH <2)	6 months	SM 1060
Microcystins	GOES	100 ml	Cooled. 150 mg thiosulfate / 1L of sample	21 days	UNE EN ISO 5667-3
Nitrate	POV	100 ml	Cooled 0.45µm in situ filtration	4 days	UNE EN ISO 5667-3
	V		Freezing	1 month	
Nitrites	V	100 ml	Cooled	1 day	UNE EN ISO 5667-3
			Frozen	8 days	
Kjeldahl nitrogen (KTN)	P	500 ml	Cooled H ₂ SO ₄ (pH < 2)	1 month	UNE EN ISO 5667-3
			Frozen	6 months	
Total nitrogen	POV	100 ml	Refrigerated in darkness	2 days	UNE EN ISO 5667-3
			Cooled H ₂ SO ₄ (pH < 2)	1 month	
			Freezing	1 month	
Smell and taste	P (taste) V (Smell and taste)	500 ml	Refrigeration	72 hours	UNE EN ISO 1622:2006
Oxidizability	POV	200 ml	Refrigerated in darkness	2 days	UNE EN ISO 5667-3
			Frozen	1 month	
pH	POV	100 ml	Cooled Preferably on site	1 d	UNE EN ISO 5667-3

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
Pesticides and semi-volatile compounds	V	100 ml	Cooled 80 mg thiosulfate / 1L of sample	7 days 4 days Naphthalene	UNE EN ISO 5667-3
Radioactivity (total alpha activity, total beta activity and residual beta activity)	P	1000 ml	Refrigeration in darkness	7 days	UNE EN ISO 5667-3
			Cooled HNO ₃ (pH <2)	1 month	
Radon	V No headroom	100 ml	Temperature < Sampled water temperature	2 days	UNE EN ISO 5667-3
Salinity	See Conductivity				
Silicates	P	100 ml	Cooled In situ filtration 0.45µm	1 month	UNE EN ISO 5667-3
Suspended solids	POV	1200 ml	Refrigeration	7 days	SM 1060
Settleable solids	POV	1200 ml	Refrigeration	7 days	SM 1060
Sulfides	POV	100 ml	Refrigeration 0.2 ml Zinc Acetate 2N + NaOH (pH >9)	28 days	SM 1060
Per- and polyfluoroalkyl substances (PFAS)	P	60 ml	Refrigeration	28 days	ISO 21675
Anionic surfactants	V	100 ml	Cooled	3 days	UNE EN ISO 5667-3
Cationic surfactants	V	100 ml	Cooled	2 days	UNE EN ISO 5667-3
Non-ionic surfactants	V	100 ml	Cooled + formaldehyde	1 month	UNE EN ISO 5667-3
Tritium	POV No headroom	100 ml	Refrigerated in darkness	3 months	UNE EN ISO 5667-3
Turbidity	POV	60 ml	Refrigeration and darkness Preferably on site	2 days	SM 1060

Packaging legend: P (Plastic), V (Glass), VT (Topaz Glass)

TYPE OF ANALYSIS: MICROBIOLOGICAL

Matrix : Food, Fertilizers, Soils and sludge, Substrates, Swabs, Contact plates, Ambient plates.

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Food	Count	Recommended: 200 g Minimum: 20 g	Original packaging or aseptically sealed packaging	Perishable or perishable samples: 1 day. Stable samples (canned goods, frozen samples...): 1 week.	According to usual product storage conditions: Ambient temperature Refrigeration Freezing	According to usual product storage guidelines after opening: Room temperature Refrigeration Freezing	1 week	Freezing: Cooling: ZE(0)8 Ambient temperature
Food	Investigation	Recommended: Twice the minimum. <u>Minimum</u> : The quantity in which the result is expressed (for example, "Not detected in 25 g" requires a minimum of 25 g and a recommended quantity of 50 g).	Original packaging or aseptically sealed packaging	Perishable or perishable samples: 1 day. Stable samples (canned goods, frozen samples...): 1 week.	According to usual product storage: Room temperature Refrigeration Freezing	According to usual product storage guidelines after opening: Room temperature Refrigeration Freezing	1 week	Freezing: ZE (-0)8 Cooling: ZE(0)8 Ambient temperature
Fertilizers	Count	Recommended: 200 g Minimum: 20 g	Original packaging or aseptically sealed packaging	Perishable or perishable samples: 1 day. Stable samples (stabilized bioproducts , inorganic fertilizers): 1 week.	According to usual product storage conditions: Ambient temperature Refrigeration Freezing	According to usual product storage guidelines after opening: Room temperature Refrigeration Freezing	1 week	Cooling: ZE(0)8 Ambient temperature

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Fertilizers	Investigation	Recommended: Twice the minimum. <u>Minimum</u> : The quantity in which the result is expressed (for example, "Not detected in 25 g" requires a minimum of 25 g and a recommended quantity of 50 g).	Original packaging or aseptically sealed packaging	Perishable or perishable samples: 1 day Stable samples (stabilized bioproducts , inorganic fertilizers): 1 week.	According to usual product storage conditions: Ambient temperature Refrigeration Freezing	According to usual product storage guidelines after opening: Room temperature Refrigeration Freezing	1 month	Cooling: ZE(0)8 Ambient temperature
Fertilizers	Viable propagule assay of weed seeds (determination of adventitious flora)	1 Kg	Aseptic sealed container	1 week	Ambient temperature	Ambient temperature	Not applicable (complete sample processing)	Ambient temperature
Fertilizers	Plant response (Potted growth trial of Chinese cabbage)	1 Kg	Aseptic sealed container	1 week	Ambient temperature	Ambient temperature	Not applicable (complete sample processing)	Ambient temperature
Soils and muds	Count	Recommended: 200 g Minimum: 20 g	Aseptic sealed container	1 day	Refrigeration temperature	Refrigeration temperature	1 month	ZE(0)8

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Soils and muds</i>	<i>Investigation</i>	Recommended: Twice the minimum. <u>Minimum</u> : The quantity in which the result is expressed (for example, "Not detected in 25 g" requires a minimum of 25 g and a recommended quantity of 50 g).	Aseptic sealed container	1 day	Refrigeration temperature	Refrigeration temperature	1 month	ZE(0)8
<i>Soils (substrates)</i>	<i>Viable propagule assay of weed seeds (determination of adventitious flora)</i>	1 Kg	Aseptic sealed container	1 week	Ambient temperature	Ambient temperature	Not applicable (complete sample processing)	Ambient temperature
<i>Soils (substrates)</i>	<i>Plant response (Potted growth trial of Chinese cabbage)</i>	1 Kg	Aseptic sealed container	1 week	Ambient temperature	Ambient temperature	Not applicable (complete sample processing)	Ambient temperature

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Swabs	Count ^(2,3)	1 swab for multiple determinations (maximum 6 determinations per swab).	Dry surfaces: Swab with 10 ml of maximum recovery diluent (MRD). Wet surfaces without disinfectants present: Dry swab. Surfaces (wet or dry) treated with disinfectants or of unknown condition: Swab with 10 ml of neutralizing solution (NRS). Sampling of 100 cm²	1 day	Refrigeration temperature	Ambient temperature	1 week	ZE(0)8
Swabs	Research ⁽²⁾	1 swab for each determination	Dry surfaces: Swab with 1 ml of maximum recovery diluent (MRD). Wet surfaces without disinfectants present: Dry swab. Surfaces (wet or dry) treated with disinfectants or of unknown condition: Swab with 1 ml of neutralizing solution (NRS). Sampling of 100 cm²	1 day	Refrigeration temperature	Not applicable (complete sample processing)	Not applicable (complete sample processing)	ZE(0)8
Swabs	Legionella spp / L. pneumophila ⁽²⁾	1 swab with 10 ml of Ringer 1/40	1 swab with 10 ml of Ringer 1/40 Sampling of 100 cm²	Advisable: 1 day Maximum: 5 days	Cooling temperature (6-18 °C)	Refrigeration temperature (6-18 °C)	Refrigeration temperature (6-18 °C)	ZE(0)2

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Swabs	<i>Norovirus and Hepatitis A Research</i> ⁽²⁾	Swab moistened with PBS	Swab moistened in PBS. Sampling of 100 cm ²	temperature : 6 months	Refrigeration temperature. Freeze upon receipt.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Freezing: ZE (-0)8
Contact plates	<i>Mesophilic aerobes</i> ⁽³⁾	Sampled plate + transport target	1 Rodac PCA plate with neutralizer per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (30 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable
Contact plates	<i>Enterobacteriaceae</i> ⁽³⁾	Sampled plate + transport target	1 Rodac VRBG plate per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (37 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable
Contact plates	<i>Molds and yeasts</i> ⁽³⁾	Sampled plate + transport target	1 Rodac plate of Rose Bengal Chloramphenicol per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (25 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Ambient plates: Sedimentation	Mesophilic aerobes ⁽⁴⁾	10 minutes	1 Rodac PCA plate per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (30 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable
Ambient plates: Sedimentation	Molds and yeasts ⁽⁴⁾	10 minutes	1 Rodac plate of Rose Bengal Chloramphenicol per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (25 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable
Environmental plates: Impaction	Mesophilic aerobes ⁽⁴⁾	100 liters	1 Rodac PCA plate per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (30 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable
Environmental plates: Impaction	Molds and yeasts ⁽⁴⁾	100 liters	1 Rodac plate of Rose Bengal Chloramphenicol per sampling point	8 hours (Recommended timeframe, indicative)	Room temperature until arrival at the laboratory. Incubation at (25 ± 1) °C according to the equipment assigned in PTV-MC-004.	Not applicable (complete sample processing)	Not applicable (complete sample processing)	Not applicable

Matrix : waters

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
Aerobic 22 and 36°C	PE	100 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 6222
<i>Salmonella spp.</i>	PE	500 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	SM 9260 B UNE-EN ISO 6579-1:2017/A1:2021
<i>Staphylococcus aureus</i>	PE	500 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	
Total and fecal coliforms (filtration and MPN)	PE	200 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 9308-1
Fecal streptococci (filtration and NPM)	PE	200 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	
<i>Pseudomonas aeruginosa</i>	PE	500 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	
<i>Legionella Pneumophila</i> and spp	PE	1000 ml Sodium thiosulfate (24mg/liter of sample)	< 24 h refrigeration recommended 24-48 h mandatory refrigeration	48 hours Extraordinarily 72 hours (justifying)	UNE 100030

Parameter	Type of packaging	minimum size	Storage conditions	Storage time	Reference standard
<i>E. coli</i>	PE	200 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 9308-1
<i>E. coli</i> beta-glucuronidase + (filtration and NPM)	PE	500 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 9308-1 UNE EN ISO 9308-2
<i>Clostridium Perfringens</i> and its spores	PE	200 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 14189
<i>Enterococci</i>	PE	200 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	24 hours	UNE EN ISO 7899-2
Somatic bacteriophages	PE	500 ml Sodium thiosulfate (24mg/liter of sample)	Immediate refrigeration	72 hours	UNE EN ISO 10705-2

Packaging legend: PE (Sterile Plastic).

TYPE OF ANALYSIS: PHYTOPATHOLOGICAL

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Plant material</i>	<i>Fungi, bacteria, nematodes, viruses (general)</i>	Small plants: Whole plants with incipient and initial symptoms. Large plants: Area with incipient symptoms or advancing lesion front. Parts with high humidity (buds, fruits, etc.) wrapped in absorbent paper (newspaper).	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them, for example by placing each subsample in an individual bag and the entire set in a box.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9
<i>Plant material</i>	<i>Fungi: Verticillium dahliae</i>	Branches 5-10 mm in diameter and 15-25 cm long. Showing symptoms, but not completely dry.	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Plant material</i>	Fungi: <i>Phytophthora spp</i>	Fine rootlets, digging several holes around the trunk of the affected plant (preferably at the leading edge of the roots/drip line). Keep with plenty of moist soil.	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9
<i>Plant material</i>	Bacteria: <i>Xylella fastidiosa</i>	Branches/cuttings with attached leaves (containing 10 to 25 leaves, depending on size). Symptomatic plants: 4-5 small pieces of branches 30-50 cm long and medium-fine in diameter, and some pieces of mature branches with darkening in the xylomatic or cambium regions (rings or crescents of dark colors). Asymptomatic plants: 4-10 young branches from the middle-upper part of the crown.	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Plant material: Roots	Nematodes	20 g Fine roots and rootlets, digging several holes around the trunk of the affected plant (preferably at the leading edge of the roots/drip line). Keep with plenty of moist soil.	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9
Plant material	Bacteria: Clavibacter michiganensis	Plants with symptoms of decline	Use airtight containers to prevent cross-contamination and drying of the samples. If sending samples from multiple areas or plants, avoid direct contact between them.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Refrigeration temperature in case of the presence of symptoms that put the stability of the sample at risk (rots).	Until the end of the analysis	ZE(0)9 ZE9
Plant material: Seeds	Fungi, bacteria, and viruses	100 units	Original packaging or sealed aseptic packaging.	1 week	Ambient temperature	Ambient temperature	Until the end of the analysis	ZE9

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Soils and substrates	Fungi, bacteria, and nematodes	500 g. Discard the top 5 cm of soil. General: 20-40 cm deep. Lawns and meadows: 5-10 cm. Deep-rooted and fruit trees: 30-60 cm below the canopy	Sealed aseptic container.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions. (10-25 °C) Cooling temperature otherwise.	Until the end of the analysis	ZE(0)9 ZE9
Waters	Fungi, bacteria, and nematodes	500 ml	Sealed aseptic container.	1 week	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Room temperature , under mild environmental conditions (10-25 °C). Otherwise, use refrigeration temperature .	Until the end of the analysis	ZE(0)9 ZE9

TYPE OF ANALYSIS: PESTICIDES

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Fresh plant material. Fresh produce of small size, units generally <25 g e.g.: berries, peas, olives*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	1000 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material. Medium-sized fresh produce, generally 25-250 g e.g.: apples, oranges*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	1000 go at least 10 units	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material. Large fresh produce, generally units > 250 g e.g.: cabbages, cucumbers, grapes*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	2000 go at least 5 units	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material. Legumes e.g.: dried beans, dried peas*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	1000 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Fresh plant material . Tree nuts except coconut*	All those included in the list of models and determinations, except dithiocarbamates	1000 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
Fresh plant material. Coconut*	All those included in the list of models and determinations, except dithiocarbamates	5 units	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
Fresh plant material. Oilseeds e.g.: peanut*	All those included in the list of models and determinations, except dithiocarbamates	500 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
Fresh plant material. Seeds for making drinks and sweets, e.g., coffee beans*	All those included in the list of models and determinations, except dithiocarbamates	500 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
<i>Fresh plant material . Aromatic herbs e.g.: fresh parsley*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	200-500 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material. Dried spices*</i>	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	100 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material and food</i>	<i>Analysis of dithiocarbamates</i>	1000 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7
<i>Fresh plant material: High unit value products</i>	<i>All those included in the list of models and determinations</i>	The Head of Department will be consulted	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature.	ZE(0)7

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Food	<i>All those included in the list of models and determinations, except dithiocarbamates</i>	200 g	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	Fresh sample: 7 days at refrigeration temperature. Processed sample: 1 month at freezing temperature	ZE(0)7
Chemicals and fertilizers	<i>All those included in the list of models and determinations</i>	100 or 200g (preferably homogeneous)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	60 days Ambient temperature	ZE9
Plant protection products	<i>All those included in the list of models and determinations</i>	20 g (preferably homogeneous)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	60 days Ambient temperature	ZE9

Matrix	Determination	Minimum quantity required	Appropriate type of container	Maximum time frame for starting analysis from sampling	Transport conditions	Storage conditions during analysis	Storage time	Laboratory localization (Waiting Area)
Waters	Volatile organic compounds	100 ml	Airtight glass containers to prevent cross-contamination, with a thiosulfate spatula and no headspace.	1 day	Refrigeration temperature	Refrigeration temperature	1 month Refrigeration temperature	ZE(0)7
	PAHs	1000 ml	Airtight glass containers to prevent cross-contamination.	2 days	Refrigeration temperature	Refrigeration temperature	1 month Refrigeration temperature	ZE(0)7
	Pesticides	1000 ml	Airtight glass containers to prevent cross-contamination.	2 days	Refrigeration temperature	Refrigeration temperature	1 month Refrigeration temperature	ZE(0)7
	All those included in the list of models and determinations	1000 ml	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	2 days	Refrigeration temperature	Refrigeration temperature	1 month Refrigeration temperature	ZE(0)7
Soils	All those included in the list of models and determinations	1 or 2 kg (if not including coarse fraction)	Airtight containers that prevent cross-contamination and do not introduce any contaminants (bags, closed plastic or glass containers...)	-	Ambient temperature	Ambient temperature. Places free from possible cross-contamination with particles from the environment, with other types of samples and/or contaminants.	1 month Ambient temperature	ZE7

* According to Royal Decree 380/2003, which establishes the sampling methods for the control of pesticide residues in products of plant and animal origin.

TEMPERATURE CONDITIONS

ACCEPTED TEMPERATURE RANGE			
Ambient temperature	Transport refrigeration temperature	Storage refrigeration temperature	freezing storage temperature
4-45 °C	2-8 °C	Water - Physico-Chemical 1 – 5 °C	< -18 °C
		Others 2 – 8 °C	

POST-ANALYSIS STORAGE AND DISPOSAL OF SAMPLES

TYPES OF ANALYSIS	MATRIX	POST-ANALYSIS STORAGE CONDITIONS	POST-ANALYSIS STORAGE (according to Mapping)	ELIMINATION ZONE	MAXIMUM PERIOD BEFORE ELIMINATION	METHOD OF ELIMINATION
A. PHYSICAL AND/OR CHEMICAL (other than microbiological or pesticide-related)	Foliar, plant material	Cooling temperature (2-5 °C)	AGMB1	Containers	Gross 1 month	Authorized manager
	Foliar, plant material	Ambient temperature	APA1	Containers	Processed sample 1 month	Authorized manager
	Waters and aqueous solutions	Cooling temperature (2-5 °C)	AGMB2	Containers	Raw sample: 1 week in refrigeration or for the duration of the trials, 3 weeks at room temperature	Authorized manager
		Ambient temperature				
	Waters and aqueous solutions	Cooling temperature (2-5 °C)	APA2	Containers	Processed sample: 1 week in refrigeration or for the duration of the trials, 3 weeks at room temperature	Authorized manager
	Soils (raw)	Ambient temperature	AGMB3	Containers	1 month	Authorized manager
	Soils (Processed sample)	Ambient temperature	APA3	Containers	1 month	Authorized manager
	Chemical products and fertilizer products (solids and liquids)	Ambient temperature	APA4, APA5, APA6	Containers	Raw solids 1 month	Authorized manager
			AGMB4, 5, 6		Processed sample solids 2 months	
					Liquids 2 months	
	Food	Room temperature, refrigeration, freezing	AGMB10	Containers	Gross 1 month	Authorized manager
			ZE(-0)10		Frozen for 1 month	
	Sludge, mud, leaching materials and others	Ambient temperature, refrigeration	APA4, APA5, APA6	Containers	Gross 1 month	Authorized manager
			AGMB4, 5, 3	For other inquiries, please consult the Technical Director.	Processed sample 1 month	
			For other inquiries, please consult the Technical Director.		For other inquiries, please consult the Technical Director.	
B. Microbiological and Phytopathological	All	Cooling Temperature (2-8 °C)	AGMB8, 9	Microbiology containers	Until the end of the analysis	Authorized manager
C. PESTICIDES	All	Refrigeration temperature	ZE(0)7	Containers	Gross 1 week	Authorized manager
	All	freezing temperature	ZE(-0)7	Containers	Processed 1 month	Authorized manager

Note	Text
1	In the case of treated water, the biocide used must be neutralized at the time of sampling. For samples taken by FITOSOIL from chlorinated water, the laboratory has aseptic commercial containers of thiosulfate. These bottles contain approximately 20 mg/liter and neutralize up to 5 ppm of free residual chlorine. For samples treated with other disinfectants (especially for Legionella analysis in cooling towers, industrial facilities, etc.), the client must neutralize them. The biocide manufacturer must indicate the appropriate neutralizer and quantity. Information on authorized biocides, application procedures, incompatibilities, neutralizers, etc., can be obtained from the Register of Non-Agricultural Pesticides or Biocides of the Ministry of Health, Social Services and Equality. (To consult the list of authorized pesticides for Legionella, enter "100" in the "Number" field at http://www.msssi.gob.es/ciudadanos/productos.do?tipo=plaguicidas). In the case of Legionella, in addition to the water sample, it may be necessary to scrape deposits and scale using a swab. See the guidelines published by the Ministry for more detailed information on sampling facilities at risk of Legionnaires' disease (Technical Guidelines for the Prevention and Control of Legionnaires' Disease in Facilities: http://www.msssi.gob.es/ciudadanos/saludAmbLaboral/agenBiologicos/guia.htm).
2	The laboratory reports the result in CFU /swab. Additionally, the report includes an information table where these results are converted to CFU /cm². In some cases, it is not possible to know the sampled surface (knives, etc.) or to sample the recommended surface. In this case, inform the laboratory of the sampled surface (or if it is unknown) so that the results can be updated. Please note that, to meet a specific criterion, sampling of a specific surface may be necessary. See section 3, "<i>NOTE REGARDING THE SELECTION OF SWABS OR CONTACT PLATES FOR SURFACE CONTROL</i>," for more information.
3	<i>NOTE REGARDING THE CHOICE OF SWABS OR CONTACT PLATES FOR SURFACE INSPECTION</i> Contact plates are generally recommended for contamination control on dry, smooth, and clean surfaces for counting determinations, with a working range (result expression) of 1–100 CFU /plate (one plate is approximately equivalent to 25 cm²). They generally offer greater recovery efficiency than swabs. Swabs can be used on any type of surface and typically have a detection limit of 10 CFU /sampled surface. The presence of disinfectant residue on sampled surfaces can influence the results. For sampling and material selection appropriate to your needs, it is always advisable to contact the laboratory beforehand and communicate the type of surface to be sampled, the required determinations, and the criteria that must be met.
4	Environmental microbiological sampling can be performed by sedimentation or impaction, the latter being the method recommended by the laboratory. As indicated, the recommended air volume for analysis is 100 liters. If a different volume is used, please inform the laboratory of the volume analyzed so that the results can be updated.