

**Note to the Commission expert group on Fertilising Products
on
on a new standardisation request in support of the Fertilising Products Regulation**

The European Commission mandated the European Committee for Standardisation (CEN) to develop technical specifications and harmonised standards in support of the Fertilising Products Regulation, as adopted in 2019. This first mandate has been amended to include [the first technical amendments](#) adopted in 2021.

The Annexes to the FPR have been further amended or are about to be amended by the following Delegated Regulations:

- [Precipitated phosphate salts and derivatives](#)
- [Thermal oxidation materials and derivatives](#)
- [Pyrolysis and gasification materials](#)
- [Safety and agronomic efficiency criteria for by-products](#) * work in progress
- [High purity materials](#) * work in progress
- [Technical amendments 2](#) * work in progress

GROW/F2 is considering the need to develop harmonised standards in support of the new requirements.

This note has two Annexes:

Annex I contains a first list of harmonised standards to be requested and the deadline for their delivery.

Annex II lists the corresponding requirements for the standards in Annex I.

The Members and Observers of the group are invited to comment on the two Annexes by 30 April 2022.

Please, consider also if:

1. There are any existend standards which can be indicated as reference documents;
2. There is a need to lay down an exemption from the standard requirement of ensuring the reliability of methods and reproducibility of results with interlaboratory tests;
3. There is a need for a harmonised standard to determine the radioactivity of EU fertilising products containing or consisting of residues from the processing or purification of sedimentary phosphate ore.
4. There is a need for additional standards, as with the proposed amendments ([Technical amendments 2](#)), parameters relevant to digestate will also apply to the fractions of digestate after post-processing (please see correlation Table I below).

Correlation Table I

| Current mandate (M/564) Requested hENs | | Current relevant provisions | | Future relevant provisions |
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| 51. European Standard: Compost and digestate properties when used in fertilising products | 1. Determination of the PAH₁₆ content in compost and digestate To use as basis standard: EN 16181 | Fertilising products – Determination of the PAH ₁₆ content in composts and digestates | Annex II, Part II, CMC 3, point 4(a) Annex II, Part II, CMC5, point 4 | The parameter of determination of PAH ₁₆ content refers also to digestate fractions after dewatering, ammonia stripping and phosphorus removal |
| | 2. Determination of the content of macroscopic impurities (glass, metal, plastics) above 2mm in compost and digestate To use as basis technical specification: CEN TS/16202 | Fertilising products – Determination of the content of macroscopic impurities (glass, metal, plastics) above 2mm in composts and digestates | Annex II, Part II, CMC3, point 4(b) and (c) Annex II, Part II, CMC 5, point 5(a) and (b) | The parameter of determination of macroscopic impurities content refers also to digestate fractions after dewatering, ammonia stripping and phosphorus removal |
| | 4. Determination of the oxygen uptake rate in compost and digestate To use as basis standard: EN 16087-1 | Fertilising products – Determination of the oxygen uptake rate in composts and digestates | Annex II, Part II, CMC 3, point 5(a) Annex II, Part II, CMC 4, point 4(a) Annex II, Part II, CMC 5, point 6(a) | The parameter of determination of oxygen uptake refers also to digestate fractions after dewatering, ammonia stripping and phosphorus removal |
| | 6. Determination of the residual biogas potential in digestate To use as basis British standard: OFW004-004 | Fertilising products – Determination of the residual biogas potential in digestate | Annex II, Part II, CMC 4, point 4(b) Annex II, Part II, CMC 5, point 7(b) | The parameter of determination of residual biogas potential refers also to in digestate fractions after dewatering, ammonia stripping and phosphorus removal |

This is a working document and reflects the (preliminary) position of DG GROW/F2. It may not in any circumstances be regarded as representing the official position of the European Commission.

ANNEX I

Table 1. List of harmonised standards to be drafted, and deadlines for their adoption

| No | Title of standard | Requirements to be covered by the standard | Deadline for adoption by CEN |
|----|--|---|--|
| 1. | European Standard: - Precipitated phosphate salts and derivates properties when used in fertilising products | <ol style="list-style-type: none"> 1. Determination of the P₂O₅ content (only for salts) 2. Determination of the dry matter content 3. Determination of the organic carbon content (only for salts) 4. Determination of the content of macroscopic impurities above 2mm in the form of organic matter, glass, stones, metal and plastics (only for salts) 5. Determination of the PAH₁₆ content 6. Determination of aluminium content 7. Determination of iron content 8. Determination of pressure, temperature and timing profile during pressure sterilisation 9. Determination of temperature and timing profile during pasteurisation or hygenisation 10. Determination of temperature profile during precipitation process | 48 months after notification of the request to CEN |
| 2. | European Standard: Fertilising products containing precipitated phosphate salts and derivates – Determination of pathogens | <ol style="list-style-type: none"> 1. Determination of <i>Clostridium perfringens</i> 2. Detection of <i>Ascaris</i> sp. viable eggs 3. Detection of <i>Salmonella</i> spp. 4. Determination of <i>Escherichia coli</i> 5. Determination of <i>Enterococcaceae</i> | 48 months after notification of the request to CEN |

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| 3. | European Standard: Thermal oxidation materials properties in fertilising products | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the organic carbon content (in slags and bottom ashes) 3. Determination of the PAH₁₆ content 4. Determination of the WHO toxicity equivalents of PCDD/F content 5. Determination of the temperature, timing and oxygen availability profile during the thermal oxidation (in an incineration or combustion chamber) | 48 months after notification of the request to CEN |
| 4. | European Standard: Fertilising products when containing thermal oxidation materials and derivatives – Determination of specific parameters | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the total chromium content 3. Determination of the thallium content 4. Determination of the chlorine content 5. Determination of the vanadium content 6. Determination of the manganese content | 48 months after notification of the request to CEN |
| 5. | European Standard: Pyrolysis and gasification materials properties when used in fertilising products | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the organic carbon content 3. Determination of the molar ratio of hydrogen to organic carbon (H / C_{org}) 4. Determination of the WHO toxicity equivalents of PCDD/F content 5. Determination of the PAH₁₆ content 6. Determination of the temperature, timing and oxygen availability profile during the thermochemical conversion process (in a pyrolysis or gasification reactor) | 48 months after notification of the request to CEN |

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| 6. | European Standard: Fertilising products when containing pyrolysis and gasification materials – Determination of specific parameters | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the manganese content 3. Determination of the chlorine content 4. Determination of the thallium content | 48 months after notification of the request to CEN |
| 7. | European Standard: By-products properties when used in fertilising products | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the ammonium salts, sulphate salts, phosphate salts, sulfur, calcium carbonate, calcium oxide magnesium carbonate, magnesium oxide, water soluble potassium salts, magnesium and sodium content 3. Determination of the zinc, copper, iron, manganese and cobalt content 4. Determination of the organic carbon content 5. Determination of the PAH₁₆ content 6. Determination of the WHO toxicity equivalents of PCDD/PCDF content | 48 months after notification of the request to CEN |
| 8. | European Standard: Fertilising products containing by-products – Determination of specific parameters | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the total chromium content 3. Determination of the thallium content 4. Determination of the chloride content 5. Determination of the vanadium content 6. Determination of the selenium content | 48 months after notification of the request to CEN |

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| 9. | European Standard: - High purity materials properties when used in fertilising products | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the ammonium salts, sulphate salts, phosphate salts, sulfur, calcium carbonate, calcium oxide content 3. Determination of the organic carbon content 4. Determination of the PAH₁₆ content 5. Determination of the WHO toxicity equivalents of PCDD/PCDF content | 48 months after notification of the request to CEN |
| 10. | European Standard: Fertilising products containing high purity materials – Determination of specific parameters | <ol style="list-style-type: none"> 1. Determination of the dry matter content 2. Determination of the total chromium content 3. Determination of the thallium content 4. Determination of the chloride content 5. Determination of the selenium content 6. Determination of pressure, temperature and timing profile during pressure sterilisation 7. Determination of temperature and timing profile during pasteurisation or hygenisation | 48 months after notification of the request to CEN |
| 11. | European Standard: Fertilising products when containing high purity materials – Determination of pathogens | <ol style="list-style-type: none"> 1. Detection of <i>Salmonella</i> spp. 2. Determination of <i>Escherichia coli</i> 3. Determination of <i>Enterococcaceae</i> | 48 months after notification of the request to CEN |

Table 2. List of harmonised standards to be drafted in support of the harmonised standards listed in Table 1 of this Annex, and deadlines for their adoption

| No | Title | Deadline for adoption by CEN |
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| 12. | European Standard: Precipitated phosphate salts and derivatives - Sampling methods and sample preparation | 48 months after notification of the request to CEN |
| 13. | European Standard: Thermal oxidation materials and derivatives - Sampling methods and sample preparation | 48 months after notification of the request to CEN |
| 14. | European Standard: Gasification and pyrolysis materials - Sampling methods and sample preparation | 48 months after notification of the request to CEN |
| 15. | European Standard: By-products - Sampling methods and sample preparation | 48 months after notification of the request to CEN |
| 16. | European Standard: High purity materials - Sampling methods and sample preparation | 48 months after notification of the request to CEN |

ANNEX II

Specific requirements corresponding to the standards in Annex I

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| Fertilising products – Determination of the P ₂ O ₅ content in precipitated phosphate salts | Annex II, Part II, CMC 12, point 3(a) |
| Fertilising products – Determination of the dry matter content in precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, points 3, 11, 12 and 14 |
| Fertilising products – Determination of the organic carbon content in precipitated phosphate salts | Annex II, Part II, CMC 12, point 3(b) |
| Fertilising products – Determination of the content of macroscopic impurities (organic matter, glass, stones, metal and plastics) above 2mm in precipitated phosphate salts | Annex II, Part II, CMC 12, point 3(c) and (d) |
| Fertilising products – Determination of the PAH16 content in precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, point 11 |
| Fertilising products – Determination of aluminium content in precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, point 12 |
| Fertilising products – Determination of iron content in precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, point 12 |
| Fertilising products – Determination of pressure, temperature and timing profile during pressure sterilisation of precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, point 10 (a) |
| Fertilising products – Determination of temperature profile during precipitation process | Annex II, Part II, CMC 12, point 1 |
| Fertilising products – Determination of temperature and timing profile during pasteurisation or hygenisation of precipitated phosphate salts and derivates | Annex II, Part II, CMC 12, point 10 (b) |
| Fertilising products containing precipitated phosphate salts and derivates - Detection of <i>Clostridium perfringens</i> | Annex II, Part II, CMC 12, point 9 |
| Fertilising products containing precipitated phosphate salts and derivates - Detection of viable <i>Ascaris</i> sp. eggs | Annex II, Part II, CMC 12, point 9 |
| Fertilising products containing precipitated phosphate salts and derivates - Detection of <i>Salmonella</i> spp. | Annex II, Part II, CMC 12, point 8 |
| Fertilising products containing precipitated phosphate salts | Annex II, Part II, CMC |

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| and derivates - Determination of <i>Escherichia coli</i> | 12, point 8 |
| Fertilising products containing precipitated phosphate salts and derivates – Determination of <i>Enterococcaceae</i> | Annex II, Part II, CMC 12, point 8 |
| Fertilising products – Determination of the dry matter content of thermal oxidation materials | Annex II, Part II, CMC 13, point 4 and 5 |
| Fertilising products – Determination of the organic carbon content of thermal oxidation materials | Annex II, Part II, CMC 13, point 4(b) |
| Fertilising products – Determination of the PAH ₁₆ content in thermal oxidation materials | Annex II, Part II, CMC 13, point 5(a) |
| Fertilising products – Determination of the WHO toxicity equivalents of PCDD/F content in thermal oxidation materials | Annex II, Part II, CMC 13, point 5(b) |
| Fertilising products – Determination of the temperature, timing and oxygen availability profile during thermal oxidation (in an incineration or combustion chamber) | Annex II, Part II, CMC 13, point 3 |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the total chromium content | Annex II, Part II, CMC 13, point 7(a) |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the thallium content | Annex II, Part II, CMC 13, point 7(b) |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the chlorine content | Annex II, Part II, CMC 13, point 7 |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the dry matter content | Annex II, Part II, CMC 13, point 7 |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the vanadium content | Annex II, Part II, CMC 13, point 7 |
| Fertilising products containing thermal oxidation materials and derivates – Determination of the manganese content | Annex III, Part I, point 7a |
| Fertilising products – Determination of the dry matter content of pyrolysis and gasification materials | Annex II, Part II, CMC 14, points 3 and 6 |
| Fertilising products – Determination of the organic carbon content of pyrolysis and gasification materials | Annex II, Part II, CMC 14, point 3 |
| Fertilising products – Determination of the molar ration of hydrogen to organic carbon (H / C _{org}) in pyrolysis and gasification materials | Annex II, Part II, CMC 14, point 3 |
| Fertilising products – Determination of the PAH ₁₆ content | Annex II, Part II, CMC |

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| in pyrolysis and gasification materials | 14, point 3(a) |
| Fertilising products – Determination of the WHO toxicity equivalents of PCDD/F content in pyrolysis and gasification materials | Annex II, Part II, CMC 14, point 3(b) |
| Fertilising products - Determination of the temperature, timing and oxygen availability profile during the thermochemical conversion process (in a pyrolysis or gasification reactor) | Annex II, Part II, CMC 14, point 2 |
| Fertilising products containing pyrolysis and gasification materials - Determination of the dry matter content | Annex II, Part II, CMC 14, point 6 |
| Fertilising products containing pyrolysis and gasification materials - Determination of the chlorine content | Annex II, Part II, CMC 14, point 6(a) |
| Fertilising products containing pyrolysis and gasification materials - Determination of the thallium content | Annex II, Part II, CMC 14, point 6(b) |
| Fertilising products containing pyrolysis and gasification materials - Determination of the manganese content | Annex III, Part I, point 7a |
| Fertilising products – Determination of the dry matter content in by-products | Delegated Regulation xxxxx, Articles 1 and 2 |
| Fertilising products – Determination of the ammonium salts, sulphate salts, phosphate salts, sulfur, calcium carbonate, calcium oxide magnesium carbonate, magnesium oxide, water soluble potassium salts, magnesium and sodium, zinc, copper, iron, manganese and cobalt content | Delegated Regulation xxxxx, Articles 1 and 2 |
| Fertilising products – Determination of the organic carbon (C _{org}) content in by-products | Delegated regulation xxxxx, Art 1, point 1(c) |
| Fertilising products – Determination of the PAH ₁₆ content in by-products | Delegated regulation xxxxx, Art 1, points 1(d) and 2(c) |
| Fertilising products – Determination of the WHO toxicity equivalents of PCDD/PCDF content in by-products | Delegated regulation xxxxx, Art 1, points 1(e) and 2(d) |
| Fertilising products containing by-products - Determination of the dry matter content | Delegated regulation xxxxx, Articles 1 and 2 |
| Fertilising products containing by-products - Determination of the total chromium content | Delegated regulation xxxxx, Article 1, second paragraph, point (a) and Article 2, second |

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| Fertilising products containing by-products - Determination of the thallium content | Delegated regulation xxxxx, Article 1, second paragraph, point (b) and Article 2, second paragraph, point (b) |
| Fertilising products containing by-products - Determination of the vanadium content | Delegated regulation xxxxx, Article 2, point 2(c) |
| Fertilising products containing by-products - Determination of the selenium content | Delegated regulation xxxxx, Article 4, point 1 |
| Fertilising products containing by-products - Determination of the chloride content | Delegated regulation xxxxx, Article 2, point 2 |
| Fertilising products – Determination of the dry matter content in high purity materials | Annex II, Part II, CMC 15, points 1, 3 and 4 |
| Fertilising products – Determination of the ammonium salts, sulphate salts, phosphate salts, sulfur, calcium carbonate, calcium oxide content | Annex II, Part II, CMC 15, point 1 |
| Fertilising products – Determination of the organic carbon content in high purity materials | Annex II, Part II, CMC 15, point 3 |
| Fertilising products – Determination of the PAH ₁₆ content in high purity materials | Annex II, Part II, CMC 15, point 4(a) |
| Fertilising products – Determination of the WHO toxicity equivalents of PCDD/PCDF content in high purity materials | Annex II, Part II, CMC 15, point 4 (b) |
| Fertilising products containing high purity materials - Determination of the dry matter content | Annex II, Part II, CMC 15, point 5 Annex III, Part II, CMC 15, point 7b |
| Fertilising products containing high purity materials - Determination of the total chromium content | Annex II, Part II, CMC 15, point 5 (a) |
| Fertilising products containing high purity materials - Determination of the thallium content | Annex II, Part II, CMC 15, point 5 (b) |
| Fertilising products containing high purity materials - Determination of the chloride content | Annex III, Part I, point 7b |
| Fertilising products containing high purity materials - Determination of the selenium content | Annex III, Part I, , point 7b |

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| Fertilising products containing high purity materials – Detection of <i>Salmonella</i> spp. | Annex II, Part II, CMC 15, point 7 |
| Fertilising products containing high purity materials - Determination <i>Escherichia coli</i> | Annex II, Part II, CMC 15, point 7 |
| Fertilising products containing high purity materials - Determination of <i>Enterococcaceae</i> | Annex II, Part II, CMC 15, point 7 |
| Fertilising products containing high purity materials - Determination of pressure, temperature and timing profile during pressure sterilisation | Annex II, Part II, CMC 15, point 8 |
| Fertilising products containing high purity materials - Determination of temperature and timing profile during pasteurisation or hygenisation | Annex II, Part II, CMC 15, point 8 |