

To the European Commission - EU Fertilising Products Regulation - Public Consultations

Public Consultations deadline 14th January 2022

CMC15 https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13113-Fertilisers-high-purity-materials-in-EU-fertilising-products_en

CMC11 https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13111-Fertilisers-agronomic-efficiency-and-safety-criteria-for-by-products-in-EU-fertilising-products_en

Comments on proposed delegated acts & criteria for CMCs 11 and 15

ESPP thanks the European Commission, DG GROW and JRC, for these well prepared and constructive proposals.

We welcome the recognition, in these proposals, of the importance of authorising the continuation of use in EU fertilising products of quality by-products which are widely used today in the fertilisers industry across Europe, because this is important for the Circular Economy.

We welcome the CMC15 proposal to widen beyond by-products (CMC11) to include certain recovered inorganic materials. In particular, we welcome that, to our understanding, CMC15 (2b) will enable inclusion in EU-fertilisers of **recovered nitrogen salts from off-gases**, such as ammonium sulphate stripped and recovered from biogas digestates and from certain other processes.

We also welcome that, to our understanding, CMC15 (2a) will enable inclusion of e.g. struvite recovered from treatment of discharge water from **phosphogypsum waste stacks**.

We note however that neither CMC11 nor CMC15 cover organic by-products. Some organic by-products are covered under existing CMCs (CMC2 = mechanically processed plant materials, CMCS 3-5 = composts and digestates, CMC6 = certain listed food industry by-products). Others are not, and are currently excluded from use in EU fertilising products, such as from the pulp & paper industry, biofuels processing, etc.

ESPP fully supports the principle (already applied in the now-adopted “STRUBIAS” criteria, CMCs 12-14), that where by-products or secondary materials used in EU fertilising products are liable to contain specific contaminants not limited in the relevant PFC criteria, these should be limited in the CMC criteria. This is important to fertilising product safety and to ensure consumer and farmer confidence. We support the proposed provision that verification of specific contaminants should not be required if absence or very low levels follow “certainly and uncontestably” from the manufacturing process and input materials.

As an overall principle, we suggest that limits for such CMC-specific contaminants should be defined at the level of the CMC material, not at the level of the final fertilising product (PFC), in order to avoid “dilution” of contaminants, and to avoid the introduction of undesirable contaminants into the fertiliser production chain. Exceptions could be made for contaminants which are also micro-nutrients (copper, zinc, selenium ...) but only in the specific case of the CMC material being used in a fertilising product specifically intended to provide the micronutrient in question.

Please find below our comments on the texts submitted to public consultation:

CMC11 art. 1-1a – exclusions of potassium and magnesium salts

We regret that **salts of potassium and magnesium are not included in the list in CMC11 art.1a**. These are important plant nutrients, necessary for healthy growth of plants. Potassium is one of the three main plant nutrients, in “NPK” fertilisers. Magnesium acts in phosphorus transport in plants, and is necessary for cell division, protein production, cell energy metabolism and carbon fixation. Magnesium in crops is an important nutrient for human health.

Processes to recover such salts exist but are currently developed to recover these nutrient salts from waste incineration ashes or other waste streams (so not by-products as in CMC11). Exclusion of potassium and magnesium salts closes the door to future innovation, whereas there is no reason to expect such recovered salts to contain contaminants or pose safety issues different from those already considered in CMC11 for the other comparable mineral salts.

CMC11 art. 1-1b – Can the “production process” include wastes as inputs?

CMC11 1b specifies “By-products ... which provide nutrients to plants ... are produced as an integral part of a production process that uses as input materials substances and mixtures, ...”

For the reasons outlined below under CMC15 art. 2a., we suggest that this wording may be understood to include processes which take in wastes as inputs, and therefore to include by-products generated at a waste treatment, recycling or recovery process. We note that art. 5 of the Waste Framework Directive also defines a “By-Product” as resulting from a “production process” but does not state that this production process cannot take in wastes as input materials. **We request that this be clarified either in the CMC text or in the FAQ.**

At present, ESPP has no examples of a production process taking waste as one of its inputs and producing a fertiliser product as a by-product but the current wording excludes future innovation and may exclude by-products which are currently used but have not been communicated.

CMC11 art. 1-1b – Can the “production process” include plant materials as inputs?

CMC11 1b specifies “By-products ... which provide nutrients to plants ... are produced as an integral part of a production process that uses as input materials substances and mixtures, ...”

To our understanding, it is established that dead organisms and parts thereof are NOT “substances and mixtures” (based on the REACH Guidance, and clarified in the FPR [FAQ](#)). In this case, **art. 1b would appear to exclude by-products recovered from production processes using plant materials as inputs, such as paper production or sugar production or biofuels production, etc.** Organic by-products from such processes are in any case excluded (by CMC11 art. 1a) but inorganic salts (as specified in 1a) could also be recovered from such processes.

We suggest to modify to “... production process that uses as input materials substances and mixtures and/or plant materials”.

CMC11 art. 1-1c – Organic carbon limit

ESPP supports the logic of the organic carbon limit in CMC 11 and CMC 15, in that as currently conceived these CMCs address only pure ‘inorganic’ materials (see our comments on organic by-products above). However, we suggest to **increase the limit to from $C_{-org} < 0.5\%$ to $C_{-org} < 1\%$ (DM)**. This would seem sufficient to ensure quality and safety. It would be coherent with the 1% organic carbon limit in Annex III, part II, 4(a) (definition of a ‘Mineral Fertiliser’) and in PFC 1(C) §2 (pathogen requirements for Inorganic Fertilisers).

The multiplication of different organic carbon limits is confusing for operators: 1% in Annex III -II – 4a, 1% in PFC 1(C) §2, 3% in CMC12, 15% for PFC 1(A)(I) -3, 5% for PFC 1(A)(II) – 3, 7.5% for PFC 1(B)(I) -3, 3% for PFC 1(B)(II) -3, 7.5% for PFC(3)(A).

CMC11 – radioactivity

ESPP has previously commented that, given the known risk of radioactivity of some mineral ore processing residues or ferrous slags, **radioactivity limits should be defined for all materials in CMC11**, subject to art. 3.

We understand from the Commission’s answer that radioactivity limits defined at an EU or national level under the Euratom treaty are applicable, but **we do not understand why the FPR cannot fix radioactivity limits, applicable if and only if they are more constraining than the Euratom limits.**

CMC11 – art. 4-1 and 4-2 – selenium and chlorine

The wordings “**declared**” and “**in accordance with Annex III**” may lead to confusion because the word “declared” is generally used for nutrient content and the reference to Annex III is unclear. We suggest to replace with wording such as “*information included in the label*” (as per wording used in the 5th line of text of art. 4.3)

Tolerance levels for the chlorine indication, when applicable, need to be specified, either in the Regulation annex or in the FAQ.

We propose to modify the following wording of art. 4-2: indication of chlorine content is required ... *“unless the EU fertilising product is produced through a manufacturing process where a Cl- containing ~~compound~~ **substances or mixtures** has ~~have been added~~ **used** with the intention of producing **or including** alkali metal salts or alkaline earth metal salts, and is ~~declared in accordance with Annex III~~”*.

Explanations:

- the term “*compound*” is not nor clearly defined (e.g. does this include minerals and ores?), whereas ‘*substance or mixture*’ are defined in REACH and are used in the FPR (e.g. in draft CMC11 art 1-1a). The term ‘*substance or mixture*’ does cover minerals and ores.
- the term “*added*” is not appropriate, because the chlorine-containing substance may react (as written, “*with the intention of producing*” a metal salt). The term ‘*used*’ combined with the added wording ‘*or including*’ covers mineral salts either introduced as such by simple mixing or produced by chemical reaction with a chlorine-containing precursor. We note that if a substance is added and does not react, then the fertilising product contains two materials, the CMC11 and the added chlorine-containing substance, so this added substance must itself be a CMC.

CMC15 art.1 – inclusion of potassium and magnesium salts

We regret that salts of potassium and magnesium are not included in the list in CMC15 art.1. These are important plant nutrients (see above under CMC11 art.1a). Processes to recover such salts exist but are currently developed to recover these nutrient salts from waste incineration ashes or other waste streams (that is NOT covered by CMC15). Exclusion of potassium and magnesium salts closes the door to future innovation. Whereas there is no reason to expect such recovered salts to contain contaminants different from those already considered in CMC15 for the other comparable mineral salts.

CMC15 art.2 – wording regarding “waste recovered from”

We suggest that it is necessary to move the words “waste recovered from” as follows (or make some other wording modification to resolve the problem below):

(2) *The high purity material shall be recovered ~~from waste generated~~ from:*

(a) *waste from a production process that uses*

(b) *a gas purification or emission control process designed ...*

Explanation: In the case of nitrogen salt recovery from off-gas from e.g. biogas, incineration or manure, the nitrogen salt is recovered directly from the off-gas (in a specific reactor, e.g. an acid bath). In such cases, the off-gas may not be classified as a “waste”. Also, the nitrogen salt is in some cases recovered directly from the manure or digestate, in one process designed and implemented for this specific purpose: e.g. air is bubbled through the liquid and a vacuum applied, pulling the air through an acid bath. This pulls ammonia off the liquid (with the air) and through the acid bath, where it is converted to a nitrogen salt. In these cases, although the digestate or manure is a “waste”, the nitrogen salt is not “*recovered from waste generated from ... a gas purification or emission control system*”.

CMC15 art. 2a – Can the “production process” include wastes as inputs?

CMC15 2a specifies “*The high purity material shall be [see comments above regarding wording ‘waste’] from: a production process that uses as input materials substances and mixtures*”

We suggest that, for the following reasons, this wording can be considered to include wastes as inputs, and therefore to include materials produced from a waste treatment, recycling or recovery process. **We request that this be clarified** in the CMC text or in the FAQ.

We note that a “substance” is defined by REACH art. 3.1 as “... *a chemical element and its compounds in the natural state or obtained by any manufacturing process ...*”. REACH specifies in recital (11) “*To ensure workability and to maintain the incentives for waste recycling and recovery, wastes should not be regarded as substances, mixtures or articles within the meaning of this Regulation*” and in art. 2 “*Waste as defined in Directive 2006/12/EC*”

of the European Parliament and of the Council is not a substance, mixture or article within the meaning of Article 3 of this Regulation”.

Thus REACH clearly excludes ‘waste’ from ‘substances and mixtures’ ONLY for the purposes of REACH. In that the objective of this targeted exclusion in REACH is stated to be to facilitate waste recycling and recovery, it would be contrary to the aims of REACH to extrapolate this exclusion to this new CMC of the Fertilising Products Regulation (and also contrary to the circular economy objectives of the FPR).

We note that EU Commission JRC’s [3rd preparatory report](#) specifies line 2823 the exclusion of “*Materials obtained from the recycling facilities for waste materials*” but this was referring to the definition of by-products (needing or not reprocessing), referring to art. 5 of the Waste Framework Directive, and so **is not applicable to CMC15 art. 2a**

We provide as a first example of a fertilising product produced from a process using wastes as inputs: TraceGrow micronutrient fertilisers recovered from end-of-life consumer alkaline batteries and reclaimed copper <https://www.tracegrow.com/zm-grow> These products are Certified as an EU Organic Fertiliser since 2018. To our understanding, these fertiliser products respect the proposed criteria of CMC15 art. 1 (< 95% sulphate salts) and the purity criteria of proposed CMC15, but would be excluded if CMC15 art. 2a is interpreted to exclude materials from a (production) process using wastes as inputs.

As a second example: ammonium phosphate fertiliser recovery from fire extinguisher refurbishment. Some 100 000 tonnes/year of contents of ABC fire extinguishers go to waste annually, as extinguishers must be emptied and refilled every 3-5 years (see ESPP’s [SCOPE Newsletter n°123](#)). This material consists largely of ammonium phosphate minerals which could be recycled as fertilisers. This has been demonstrated in the EU-funded LIFE [PHOSave](#) project. Recovered ammonium phosphates from fire extinguisher refurbishment, could after appropriate purification achieve the CMC11 mineral salt and purity conditions, but would be excluded from EU fertilising products if “production process” is considered to not include the recycling process which is fire extinguisher refurbishment, where the contents of the extinguishers is presumably “waste”.

CMC15 art. 2a – definition of “recovered”

CMC15 2a specifies “*The high purity material shall be recovered from waste generated from: (a) a production process that uses as input materials substances and mixtures ...*”. It is important to here clarify the meaning of “**recovered**”.

We propose the example of “spent sulphuric acid” used to attack phosphate rock to produce a mineral fertiliser such as TSP, already discussed in the FPR FAQ Q 8.13 (<https://ec.europa.eu/docsroom/documents/46391>)

For example, if spent sulphuric acid (e.g. after use of virgin sulphuric acid in metal treatment, and classified locally by the Member State as “waste”) is reacted with phosphate rock, followed by various chemical processing, to produce triple super phosphate, then it is our understanding that this triple super phosphate (TSP):

- Cannot be CMC1 because it is excluded by CMC1 art. 1(c) “*substances formed from precursors which have ceased to be waste ...*”
- We ask the question: **can such spent acid be CMC15, under art. 2(a)**, subject to respecting the other criteria of CMC15? In that:
 - (i) the waste-status sulphuric acid is a “substance” as defined by REACH art. 3.1 “*... a chemical element and its compounds in the natural state or obtained by any manufacturing process ...*”: the waste sulphuric acid is obtained by the manufacturing process of metal treatment.
 - (ii) the production of the TSP corresponds to the second sub-category of “recovery” (recycling) as defined in the 2012 [Guidance to the Waste Framework Directive](#), §1.4.5

CMC15 art. 2a – input plant materials (as above for CMC11)

As above, **we suggest to include materials recovered from processes using plant materials as inputs**, that is “*input materials substances and mixtures*” is too restrictive and request to add “*and/or plant materials*”.

CMC15 art. 2b – input plant materials (as above)

Again, as above, **we suggest that there is a problem in that point (i) “substances and mixtures” – to our understanding – excludes plant materials.** Plant materials may not be waste, and may not be input to “waste co-incineration” as specified in point (iv).

For example, to our understanding, the current wording excludes nitrogen or sulphur minerals recovered from offgas from power plants (electricity generation) burning a mixture of coal or fuel oil and biomass-for-energy (or indeed burning only biomass-for-energy). In this case, the coal or fuel oil is (to our understanding) a “substance or mixture”, so covered under 2b(i), but the biomass-for-energy, for example wood grown specifically as fuel, is not a “substance or mixture” and is not a waste, and the power plant is not a “waste co-incineration” plant (because it does not take in any waste).

Again, we propose to modify 2b(i) to add “and/or plant materials”.

CMC15 art 2b.v – wording

Art.41 (3) (Definitions) of 2010/75/EU specifies “ ‘waste co-incineration plant’ means ...”. For coherence therefore we propose to add the word “plant” in CMC15 art 2b.v to read: “waste within the meaning of Article 3, point 1, of Directive 2008/98/EC, and fuels input to a waste co-incineration **plant** as defined in Directive 2010/75/EU ...”.

CMC15 art 2b.vi and 2b.vii – Animal By-Product End Point

The proposed text, unlike CMCs 3, 5, 12, 13, 14, does not require that an Animal By-Product End-Point be defined.

Pathogen limits are specified in points 7 and 8, but:

- Does this resolve the regulatory question of an Animal By-Product Regulation End Point ?
- In the absence of a definition of an ABP End-Point, is it proven that the pathogen limits in points 7 and 8 are sufficient?

CMC15 art. 3 – Organic carbon limit

ESPP supports the logic of the organic carbon limit in CMC 11 and CMC 15, but as explained above for CMC11, we suggest to **increase the limit to from $C_{-org} < 0.5\%$ to $C_{-org} < 1\%$ (DM)** in order to be coherent with the 1% organic carbon limit in Annex III, part II, 4(a) (definition of a ‘Mineral

CMC15 art.6, 7 and 8

We regret that art. 6 applies to points 3 – 5 only, and not to points 7 and 8.

This means that, even if it follows certainly and uncontestably from the nature of the recovery process that pathogens will not be present, it is still necessary to test for pathogens. For example: recovery of a material from a chemical process, or recovery of a material from offgas cleaning from an incinerator.

We request to add that art. 6 also applies to points 7 and 8 where the recovered material is:

- as defined in point (2a) or (2bi)
- as defined in point 2b ii, iii or iv where the offgas is from an incineration process as defined in the IED Directive and the offgas has been subject to the conditions prescribed in this Directive (850°C, 2 seconds).

CMC15 modifications to Annex II of the FPR

We make here the same comments on **wording, on tolerances and on deliberate inclusion of chlorine** as made above for CMC11 arts. 4.1 and 4.2.