

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 15

CX/PR 21/52/19-Add.1

July 2021

ORIGINAL LANGUAGE ONLY

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

52nd Session

(Virtual)

26-30 July and 3 August 2021

ESTABLISHMENT OF CODEX SCHEDULES AND PRIORITY LISTS OF PESTICIDES FOR EVALUATION / RE-EVALUATION BY JMPR

*Public health concerns to schedule compounds for periodic review by JMPR
submitted by the European Union*

Chlorpyrifos (17)

Annex B

FORM FOR EXPRESSING CONCERNS WITH PUBLIC HEALTH ON A PESTICIDE FOR PRIORITISATION OF PERIODIC REVIEW

Submitted by: The European Union		
Date: March 2020		
Pesticide/Pesticide Code Number	Food/Food Code Number	CXL (mg/kg)
Chlorpyrifos (17)	All commodities	All CXLs
Is this a concern? Yes		
The concern relates to which prioritization criterion/criteria (Specific statement of concern)		
<p>Chlorpyrifos was originally evaluated by JMPR in 1972. It was evaluated for toxicology in 1982 by JMPR and for residues in 1995 and it was reviewed for toxicology in 1999 (confirmed ADI of 0-0.01 mg/kg bw and ARfD 0.1 mg/kg bw) and for residues in 2000, 2004 and 2006.</p> <p>There is a 20 years' gap since chlorpyrifos was last reviewed by JMPR, as it is also indicated in General considerations (point 2.6) of 2019 Report of the extra Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues.</p> <p>During the 2019 EU Peer Review of the active substance, and based on the information available from the European Food Safety Authority's Statement on the available outcomes of the human health assessment of the active substance chlorpyrifos, concerns were identified with regard to:</p> <ul style="list-style-type: none">• The genotoxic potential of chlorpyrifos which cannot be ruled out based on the information available: positive findings were found in an in vitro chromosome aberration study and two in vitro unscheduled DNA synthesis assays; in vivo positive findings were found in open literature on chromosome aberration and on DNA damage caused through oxidative stress or by topoisomerase II inhibition, which is considered a molecular initiating event for infant leukaemia. Consequently, <u>health based reference values cannot be established for chlorpyrifos and the dietary and non-dietary risk assessments cannot be conducted.</u>• Developmental neurotoxicity (DNT) effects were observed in the available study on developmental neurotoxicity in rats (adverse effects were seen at the lowest dose tested in rats and a no observed adverse effects level 'NOAEL' could not be established) and epidemiological evidence exists showing an association between exposure to chlorpyrifos and/or chlorpyrifos-methyl during development and adverse neurodevelopmental outcomes in children.		

- Based on the evidence for DNT, experts during the peer review suggested that classification of chlorpyrifos as toxic for reproduction, category 1B, H360D 'May damage the unborn child', in accordance with the criteria set out in Commission Regulation (EC) No 1272/2008 would be appropriate.

For all these reasons, it is considered that a re-evaluation for toxicology and residues of chlorpyrifos and all their CXLs is necessary and this task should be prioritized on the JMPR calendar. It was noted that aspects of epidemiology should be included.

Is supporting data being provided? Yes

Data/Information: EFSA (European Food Safety Authority), 2019. Statement on the available outcomes of the human health assessment in the context of the pesticides peer review of the active substance chlorpyrifos. EFSA Journal 2019;17(5):5809 DOI: 10.2903/j.efsa.2019.5809
<https://www.efsa.europa.eu/en/efsajournal/pub/5809>

Is this a continuing concern? No

Outline ongoing concern and provide supporting data: N.A.

Chlorothalonil (81)**Annex B****FORM FOR EXPRESSING CONCERNS WITH PUBLIC HEALTH ON A PESTICIDE
FOR PRIORITISATION OF PERIODIC REVIEW**

Submitted by: The European Union		
Date: March 2020		
Pesticide/Pesticide Code Number	Food(s)/Food Code Number(s)	CXL (mg/kg)
Chlorothalonil (81)	All commodities	All CXLs
Is this a concern: Yes		
The concern relates to which prioritisation criterion/criteria (Specific statement of concern)		
<p>Chlorothalonil was initially evaluated by JMPR in 1990 and reviewed several times for toxicology and residues (last review in 2015).</p> <p>During the EU peer review, the consumer risk assessment could not be finalised in view of the multiple identified data gaps, leading to derivation of preliminary residue definitions in plant, including processed commodities, and in animal commodities. Since R182281 (SDS-3701) is a pertinent residue in all these commodities and in the absence of toxicological reference values for R182281, even an indicative consumer risk assessment using the preliminary residue definitions could not be conducted. It is noted that for R182281 a genotoxic potential could not be excluded. Moreover, under processing conditions employing higher temperatures, degradation of chlorothalonil into R613636 was observed next to formation of R182281. Also for R613636, a genotoxic potential could not be excluded. Further to that, a genotoxic potential could not be excluded for R417888, a medium to very high persistent soil metabolite that together with R611965 formed the major residue in the rotational crop metabolism study but was not investigated in rotational crop residue trials.</p> <p>In addition, the ARfD for parent has decreased to 0.05 mg/kg bw/day during the recent EU peer review.</p> <p>New toxicological studies were submitted during the EU peer review which have not been evaluated by the JMPR. It is suggested to schedule chlorothalonil and specifically its metabolites for toxicological and exposure assessment in light of these findings.</p>		
Is supporting data being provided? Yes		
<p>Data/Information: EFSA, 2017. Peer review of the pesticide risk assessment of the active substance chlorothalonil. EFSA Journal 2018;16(1):5126. doi: 10.2903/j.efsa.2018.5126 https://www.efsa.europa.eu/en/efsajournal/pub/5126</p>		
Is this a continuing concern? No		
Outline ongoing concern and provide supporting data: N.A.		

Chlorpyrifos-methyl (90)**Annex B****FORM FOR EXPRESSING CONCERNS WITH PUBLIC HEALTH ON A PESTICIDE
FOR PRIORITISATION OF PERIODIC REVIEW**

Submitted by: The European Union		
Date: March 2020		
Pesticide/Pesticide Code Number	Food/Food Code Number	CXL (mg/kg)
Chlorpyrifos-methyl (90)	All commodities	All CXLs
Is this a concern? Yes		
<p>The concern relates to which prioritisation criterion/criteria (Specific statement of concern)</p> <p>Chlorpyrifos-methyl was originally evaluated by the JMPR in 1975. It was evaluated for both, toxicology and residues in 1991 by JMPR and it was reviewed for toxicology in 1992 and 2001 (ADI of 0-0.01 mg/kg bw/day and ARfD unnecessary) and for residues in 1993, 1994, 2009 and 2013.</p> <p>During the 2019 EU Peer Review of the active substance, and based on the information available from the European Food Safety Authority's Statement on the available outcomes of the human health assessment of chlorpyrifos methyl, concerns were identified with regard to:</p> <ul style="list-style-type: none"> • The genotoxic potential of chlorpyrifos-methyl, which cannot be ruled out when taking into account the concerns raised for chlorpyrifos concerning chromosome aberration and DNA damage that may also apply to chlorpyrifos-methyl. In addition, the available scientific open literature on chlorpyrifos-methyl, although presenting some limitations, should be considered in a weight of evidence approach and raises some concerns about the potential for chlorpyrifos-methyl to damage DNA. Consequently, health based reference values cannot be established for chlorpyrifos-methyl and the dietary and non-dietary risk assessments cannot be conducted. • Developmental neurotoxicity (DNT) – the available DNT study on chlorpyrifos-methyl did not allow for a full assessment of effects on brain development, in particular since effects on cerebellum height could not be evaluated due to the lack of controls in females and a no observed adverse effects level 'NOEL' for DNT could not be established. Since DNT effects were observed in the available developmental neurotoxicity on chlorpyrifos (adverse effects were seen at the lowest dose tested in rats and a NOEL could not be established) concerns exist also for chlorpyrifos-methyl. Moreover, epidemiological evidence exists showing an association between exposure to chlorpyrifos and/or chlorpyrifos-methyl during development and adverse neurodevelopmental outcomes in children. • Based on the evidence for developmental neurotoxicity (DNT), experts during the peer review suggested that classification of chlorpyrifos-methyl as toxic for the reproduction category 1B, H360D 'May damage the unborn child', in accordance with the criteria set out in Commission Regulation (EC) No 1272/2008 would may be appropriate. <p>For all these reasons, it is considered that a re-evaluation for toxicology and residues of chlorpyrifos methyl and all their CXLs is necessary and this task should be prioritized on JMPR calendar. It was noted that aspects of epidemiology should be included.</p>		
Is supporting data being provided? Yes		
<p>Information: European Food Safety Authority (EFSA), 2019. Updated statement on the available outcomes of the human health assessment in the context of the pesticides peer review of the active substance chlorpyrifos-methyl. EFSA Journal 2019;17(11):5908. doi: 10.2903/j.efsa.2019.5908. https://www.efsa.europa.eu/en/efsajournal/pub/5908</p>		
Is this a continuing concern? No		
Outline ongoing concern and provide supporting data: N.A.		

Propiconazole (160)**Annex B****FORM FOR EXPRESSING CONCERNS WITH PUBLIC HEALTH ON A PESTICIDE
FOR PRIORITISATION OF PERIODIC REVIEW**

Submitted by: European Union		
Date: March 2020		
Pesticide/Pesticide Code Number	Food(s)/Food Code Number(s)	CXL (mg/kg)
Propiconazole (160)	All commodities	All CXLs
Is this a concern: Yes		
The concern relates to which prioritisation criterion/criteria (Specific statement of concern)		
<p>The most recent JMPR evaluation for toxicology of propiconazole was in 2004. An ADI was set at 0.7 mg/kg bw/day (Reproductive toxicity in rats with safety factor of 100) and an ARfD at 0.3 mg/kg bw (Developmental toxicity in rats with safety factor of 100).</p> <p>Propiconazole was evaluated by EFSA in 2017. An ADI was set at 0.04 mg/kg bw/day (Chronic rat study with safety factor of 100) and an ARfD at 0.1 mg/kg bw (Developmental study in rat with safety factor of 300). EFSA could not finalise the consumer dietary risk assessment considering the outstanding data to finalise the residue definition for risk assessment for plants and the livestock exposure assessment. No conclusion could be drawn on the toxicity of several metabolites, even genotoxicity has not been studied for some of the metabolites. Endocrine effects of propiconazole have not been finalized.</p> <p>In addition, an acute intake concern was identified for European consumer from some existing and proposed CXLs.</p>		
Is supporting data being provided? Yes		
<p>Data/Information: EFSA, 2017: Conclusion on the peer review of the pesticide risk assessment of the active substance propiconazole. EFSA Journal 2017;15(7):4887. https://www.efsa.europa.eu/en/efsajournal/pub/4887</p>		
Is this a continuing concern? No		
Outline ongoing concern and provide supporting data: N.A.		