

DAIRY UK GUIDANCE ON COMPLIANCE WITH CHLORATE MRL

Background

Chlorate is a byproduct of chlorinating agents used for disinfection purposes. Chlorate residues in dairy products may arise from one or more of the following:

- Use of chlorinated water during food production;
- Use of chlorine-based disinfectants which come into contact with food;
- Use of processing aids such as sodium hydroxide for pH adjustment.

Due to its historic use as a pesticide, chlorate is currently dealt with under the pesticide legislation. However, chlorate has been banned for use as a pesticide since 2008, and residues therefore do not arise from its use as a pesticide, but rather the use of disinfectants aimed at guaranteeing the microbiological safety of food products.

New chlorate MRLs have now entered into force through Commission Regulation 2020/749. The MRL for dairy is 0.1 mg/kg and relates specifically to liquid milk, both raw and heat-treated.

With regards to other processed dairy products, Footnote A of the Regulation states that:

“(A) To take into account the specific situation of chlorate residues, in processed food (including for the purpose of this Regulation foodstuffs that have been derived using processes listed in Article 2(1)(n) of Regulation (EC) No 852/2004), that has come in contact with products containing chlorate residues, or that contains ingredients with such residues, such as processing aids or drinking water, used in compliance with the respective legal requirements, these additional contributions of chlorate residues should be taken into account when determining the permitted content of chlorate residues in or on the processed food products in accordance with Article 20 (1) of this Regulation. The burden of proof regarding the level of those additional contributions lies with the food and feed business operator.”

This excludes baby milk, which will continue to be subject to an MRL of 0.01 mg/kg.

In its enforcement approach, HSE have confirmed that these processed foods may legitimately exceed the MRL set for liquid milk with the following provisos:

- That the derogation from the MRL set will only apply where businesses provide proof that there have been legitimate additional chlorate residue inputs at the processing stage; such as through the use of potable water or other sources in processed food production, or through legitimate disinfection practices to maintain hygiene.
- That each food business generates a full description of its production practices to serve as proof that there are legitimate additional inputs leading to the MRL being exceeded.

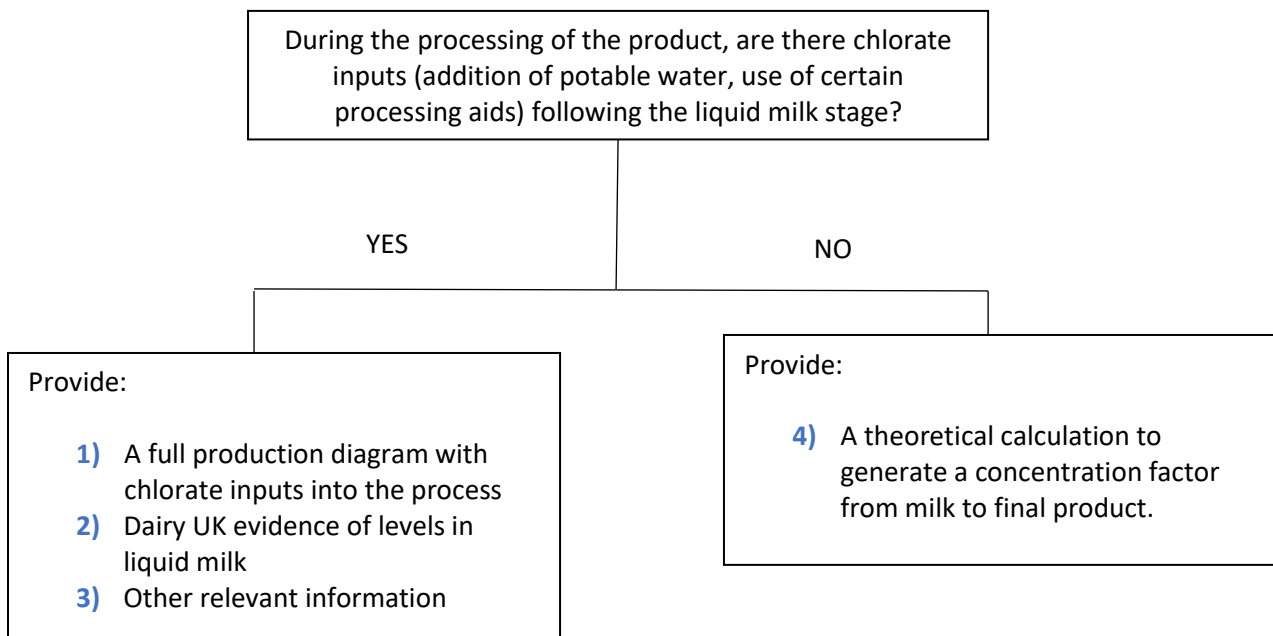
- In cases where exceedance results solely from a concentration of the residue through actions such as drying - and not because of additional chlorate inputs at the processing stage - information on the process and calculated processing factors should be generated.

In the future, HSE is expecting businesses to provide additional reassurance through the generation of before/after data for their products, allowing indicative maximum levels to be identified. Therefore, the approach outlined in this document is intended to cover the period of time during which before/after data will be generated for products at particular risk of exceeding the MRL.

Dairy UK approach to compliance

Based on our own results and those collected by the Expert Committee on Pesticide Residues in Food (PRiF) over the years, we are satisfied that the vast majority of British dairy products would not exceed the proposed MRL of 0.1 mg/kg. However, particularly concentrated dairy products may be at risk of exceeding the MRL.

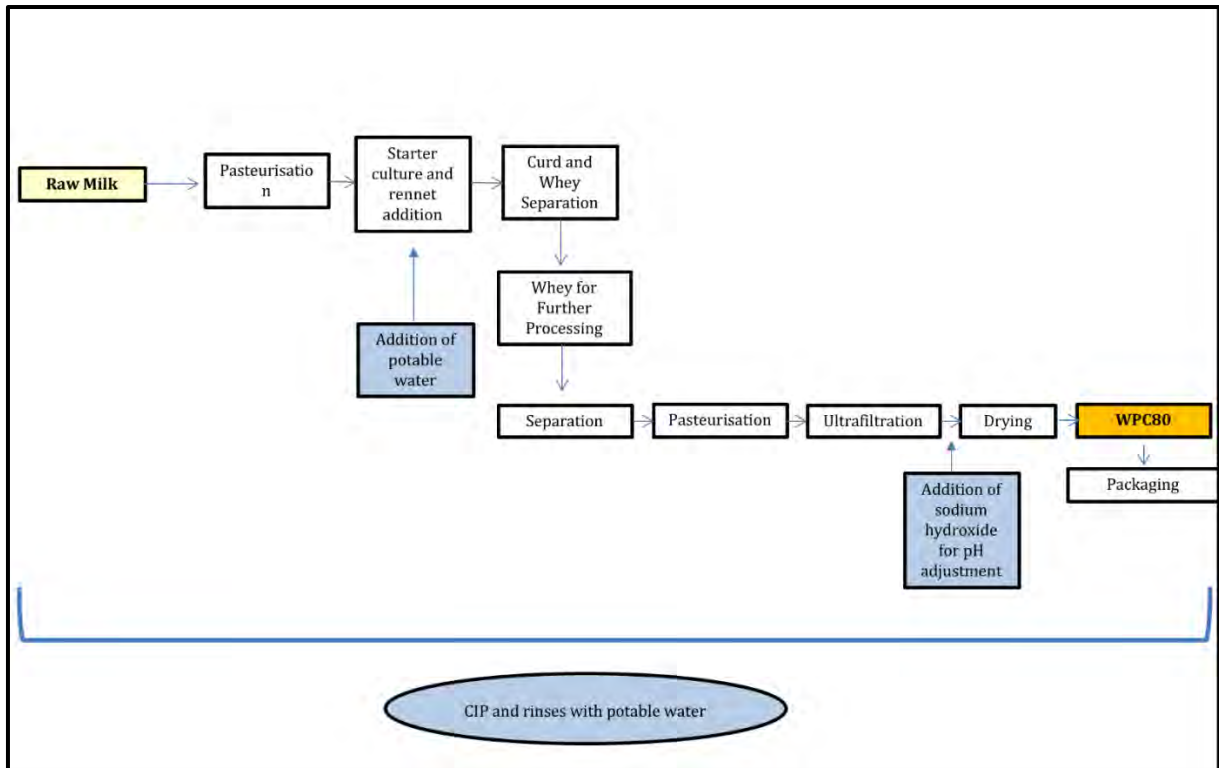
Should your product exceed the MRL of 0.1 mg/kg, Dairy UK proposes you follow the decision tree below to decide which information you should supply to justify the MRL exceedance:



Further information on the types of recommended evidence are provided below.

1) A full production diagram

Generate a full production flow diagram which includes information on chlorate inputs into the process. This is intended to provide evidence that legitimate chlorate inputs have led to the MRL being exceeded. An example for why protein concentrate 80% is provided below.



2) Dairy UK evidence of levels in liquid milk

Share findings from testing carried out by Dairy UK and other stakeholders, which shows that the liquid milk - raw or pasteurised - used to make dairy products is unlikely to exceed the new proposed MRL of 0.1 mg/kg.

3) Other relevant information

This may include any industry guidance you follow and any relevant food safety accreditation which you currently hold.

4) A theoretical calculation

Develop a theoretical calculation to generate a concentration factor from milk to final product.