POTATO INDUSTRY CIPC STEWARDSHIP GROUP

Guidelines for obtaining a potato sample for CIPC residue testing

Be CIPC Compliant

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Following its review in the EU, CIPC (chlorpropham) has been included in Annex 1 and is covered by a Maximum Residue Level (MRL) of 10mg/kg. This MRL is not a health or safety limit, but is an upper concentration within which residue levels should occur if Good Agricultural Practice (defined by the product label) has been complied with. The marketing of potatoes with a residue level above the MRL is not permitted by law.

In addition, in the UK, the best practice use of CIPC is now managed by the Potato Industry CIPC Stewardship Group. This group, working with the Chemicals Regulation Directorate, is seeking to improve use of the chemical and minimise the risk of anomalous residue levels on potatoes.

Users of the chemical should be aware that it is under threat, and that poor and unnecessary application of CIPC increases the risk of exceeding the MRL. This, in turn, would increase the likelihood that CIPC usage limits will be cut or that CIPC will be withdrawn altogether.

For the assessment of compliance with the MRL, a sample must be obtained in the appropriate way. The sampling procedure is detailed in European Commission directive 2002/63/EC, which requires that a random sample must be taken for each tested lot. This, together with input from the Chemicals Regulation Directorate, has been used to draw up these guidelines for sampling lots of 500kg or more.

Summary of legal and CRD requirements

A lot is defined as a quantity of food delivered at one time that has the same: origin, producer, variety, packer, type of packing, markings.

A sample must:

- Consist of a minimum of 12 tubers.[1]
- For lots over 500kg, tubers must be obtained from at least ten different places.
- Weigh a minimum of 1.2 kg.[2]
- All the potatoes that make up a sample must be from the same batch number/lot. Record the batch number/lot code (e.g. Desiree from Ravens Field in Store 2) and other available traceability information.
- The sample must be tubers of the same variety. Mixed samples are not acceptable.

[1] The legal requirement is 10 tubers, but it is recommended that 12 tubers are taken.
[2] The legal requirement is 1kg, but it is recommended that the sample weighs a minimum of 1.2kg.

- Only potatoes that are being marketed or used or available for marketing or use (i.e. outside the withholding period for any treatments) should be sampled.
- The sample must be in a good condition with no evidence of rotting or moulds.
- All reasonable steps should be taken to avoid cross-contamination e.g. from other lots.
- Tubers should be sampled by ungloved hand. Do not wear rubber (latex) gloves as they could contaminate the sample.[3]
- Samples should be obtained randomly. Where a random sample cannot be obtained, then sampling should take place from the accessible portion (see p4 for guidance on obtaining a random sample)
- Samples should be delivered promptly, unwashed (or without further washing) and unprocessed to a laboratory accredited by UKAS for analysis of chlorpropham on potatoes.
- If the samples have been subject to washing prior to the time of sampling, information on this should be provided.
- The samples should be sent to the laboratory in a clean, new (unused), inert container, such as polythene wrapping/bag, which provides secure protection from contamination, damage and leakage. The container should be sealed and securely labelled.

Sample information

For each sample, complete the questionnaire on pages 7-8. Submit this, together with the result from the analyst, to your Fresh Potato Suppliers Association (FPSA) or Potato Processors' Association (PPA) representative or to PICSG. Personal information will be treated in the strictest confidence. See page 6 for address details.

Obtaining a sample safely from a potato store

Sampling must be carried out with due regard to health and safety including the Working at Height Regulations 2005, which may limit access to some parts of stores.

[3] This is not a specific legal requirement, but is recommended to meet the general requirement to avoid contamination.

Box stores

It is recommended that for lots over 500 kg, one tuber should be taken from each of 12 boxes.

Tubers should be obtained from varying depths within boxes. Only one surface tuber should be sampled – this reasonably accounts for the higher deposits of CIPC that may occur here. Only when a limited number of boxes are accessible, should more than one tuber per box be sampled.

- If all box heights are accessible, using a scissor lift for example, identify at least 10 boxes (which is the legal requirement but 12 recommended) randomly on the front, back or both faces. Take at least one tuber from each box.

- If a series of fixed, stepped ladders is in the store (pictured), sample sufficient tubers from all available box heights to make up the 12 tuber sample.

- Where there is not safe access available to boxes more than 2 boxes high, it is our opinion that it is unlikely that a fully representative sample can be obtained. When a lot is not fully accessible the law permits an inspector to take a sample from the accessible parts of the lot. In this example, an inspector could choose to take from the accessible boxes. Alternatively (time and co-operation of the store operators permitting) boxes could be temporarily moved to ground level, for safe sampling, using a fork-lift truck.

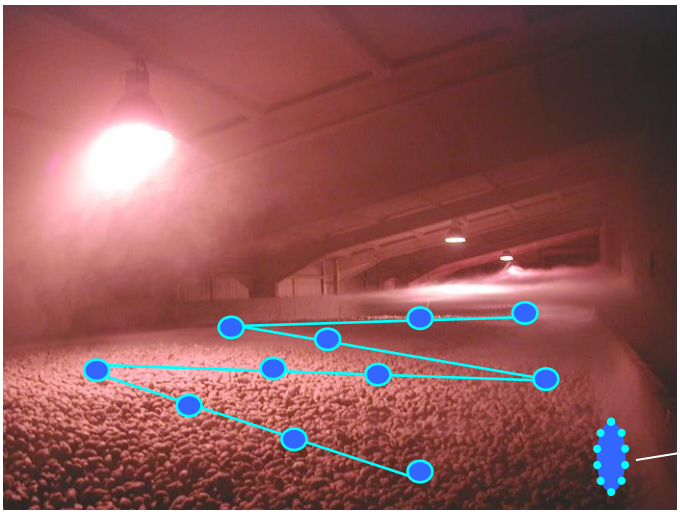
Whichever approach is taken, it is important to record how many boxes the sample was taken from, and whether or not it was possible to access all boxes.

Bulk stores

A 12 tuber sample is required.

When a lot is not fully accessible the law permits an inspector to take a sample from the accessible parts of the lot, including taking all samples from a single accessible point.

Assuming complete access, it is recommended that one tuber should be sampled from each of 12 random positions (the legal requirement is at least 10) on the top of the pile. As far as is feasible, tubers should be obtained from varying depths. If sub-surface sampling ports are available, e.g. in the duct wall, it is recommended that a tuber should be sampled from just one of these.



Otherwise, take the sample from accessible points, if necessary taking all 12 tubers from a single point.

Whatever approach is taken, it is important to record how many and what sort of locations the sample was taken from, and whether or not it was possible to access all areas.

General considerations

In both types of store, it may be difficult to get a representative sample because the accessible portion of the lot is a small proportion of all the potatoes stored.

In such cases a sample may be obtained at store loading or unloading, by taking individual tubers at different points in time rather than different locations. This method of sampling is also acceptable legally.

Packing, processing and grading facilities

Samples may be taken for MRL residue testing from packing, processing and grading facilities following the guidelines set out above.

In addition tubers may be taken from a conveyor over a period of time to obtain a representative sample for the lot. It is important to record if the tubers being taken for analysis are from a washed sample.

Finally an inspector may sample from any other place in a processing, packing or grading operation and if necessary may sample from a single accessible point. In summary, partial or very limited access will not cause an inspector to select a different lot for sampling.

Lots of under 500 kg

It is expected that users of this guidance will not need to take samples from such small lots. The legal requirements are slightly different so if sampling from smaller lots is required, consult CRD for advice.

Address details for submission of completed questionnaires.

PICSG Mike Storey
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Stoneleigh Park
Kenilworth
CV8 2TL
email: mike.storey@ahdb.org.uk

FPSA David Walker
Fresh Potato Suppliers' Association
Down Cottage
Clease Way
Compton Down
Winchester
SO21 2AL
email: dwalker@fpsa.org.uk

PPA Sharon Hall
Potato Processors' Association
Food and Drink Federation
6 Catherine Street
London
WC2B 5JJ
email: sharon.hall@ppauk.org

SAMPLING FORM

Please complete as much of this form as possible but if some information is not available then indicate this is the case in the relevant box.

Contact details		
Information in this section is strictly confidential and will only be used to confirm or request further information		
name		
company		
e-mail	tel	mob

Crop information			
potato crop identification/supplier			
sample number/id		sample date	
variety name		pre-storage MH treatment[1]	Y / N
CIPC application date(s)	dose (g/tonne)	CIPC formulation (product)	
other traceability information			

[1]Crop treated in-field with Maleic Hydrazide, e.g. Fazor or Source II

Store information		
store type	bulk no VFD[2]	
	bulk with VFD	
	box without positive ventilation	
	box with positive ventilation	
	box with positive ventilation and VFD	
	VFD used during application to recirculate CIPC fog	Y / N
For box stores - please describe systems for ventilation and application e.g. covered plenum, letterbox, etc.		
store capacity (tonnes)		
store holding temperature (ºC)		
temperature at time of CIPC application (°C)		
in low temperature stores (<5ºC) how long was refrigeration turned off before CIPC application? (hours)		
length of storage planned? (months)		
length of sprout free storage achieved? (months)		
end market (e.g. crisp, French fry, chip shop, pre-pack, general ware etc)		

[2]VFD (Variable Frequency Drive) or inverter. These are used to modify fan speed and allow the store ventilation system to be used to recirculate CIPC fog.

Sampling information	
location of sampling	
From store number of boxes or positions in bulk store from which sample is derived	
From transport or buffer store prior to processing/washing number of boxes, bulker loads or bags from which sample is derived	
From a conveyor period of time over which sample was collected approximate tonnage conveyed during sampling time	
Other if the sample was not obtained from 12 boxes, bags or positions from bulk, or 12 discrete time points, from a conveyor, what was the reason for this? e.g. limited access and small number of boxes in the lot. Sampled 4 boxes from a 6t	
Washed tubers were the tubers washed prior to sampling? e.g. for delivery/loading into a processing line or from a washed pre-pack crop	Y / N

Residue sample information	
date sample delivered to analyst	
name of analytical company	
laboratory sample reference number	
is the laboratory accredited by UKAS for analysis of CIPC on potatoes?	Y / N
is the sample washed by the laboratory before analysis?	Y / N
full analytical report available (for samples where residues are detected)	Y / N
CIPC reporting limit (level of detection mg/kg)	
CIPC residue result (mg/kg)	