



PREPTM

Acrylamide in food:
understanding the law, minimising the risks...

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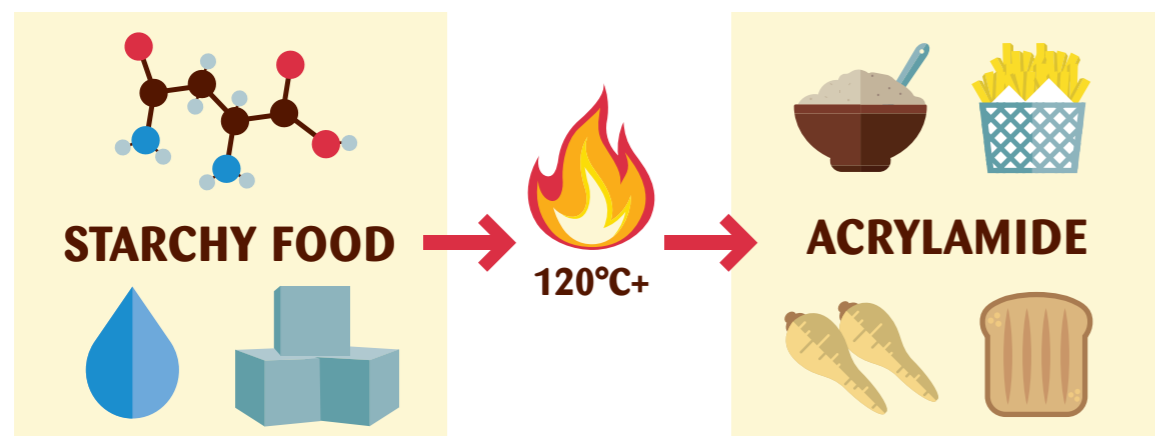
Acrylamide in food:

understanding the law, minimising the risks...

Since 2018 European food safety legislation* has required all businesses that manufacture food, or prepare and serve it to customers, to understand the potential risk of acrylamide, take steps to reduce it and be able to prove that they have done so.

What is Acrylamide?

Acrylamide is a naturally occurring chemical substance, formed by a reaction between amino acids and sugars. It occurs typically when foods with a high starch content, such as potatoes, root vegetables and bread are cooked at temperatures over 120°C from the process of frying, roasting or baking. It is widely agreed that acrylamide has the potential to cause cancer and is therefore a risk to human health.



What does the legislation say?

The **legislation*** requires that food business organisations that manufacture food, or prepare and serve it to customers in a retail or foodservice setting...

1



Be aware of the potential risk of acrylamide and have a general understanding of how it is formed in food.

2



Take steps to reduce the formation of acrylamide in food, and build these measures into food safety management procedures.

3



Where appropriate, **undertake** representative **sampling** and analysis to monitor the levels of acrylamide in food.

4



Keep records of the mitigation measures undertaken, together with sampling plans and results of any testing.

What do I need to do?

First of all you need to be aware of the risk posed by acrylamide, and how it is formed in the food you produce. Take care to ensure that your team understands this too. Then, to reduce the risk of acrylamide forming in your chips or fried potatoes, follow these six steps:



If possible, choose a potato with a lower sugar content – ask your supplier for more information.



Do not store your potatoes in the fridge – this will increase their sugar content. Instead, try to keep them at 6°C or higher.

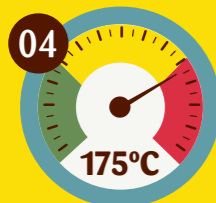
03

Before you fry your chips or potatoes, either:

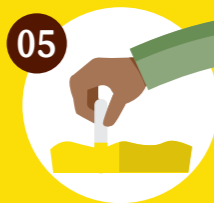
- Wash or soak in cold water, for between 30 minutes to 2 hours, then rinse in clean water.
- Soak in warm water for a few minutes, then rinse in clean water.
- Blanch in boiling water.

This will help to reduce the sugar content and decrease levels of acrylamide.

The exception to the rule is frozen chips or potatoes, where you must simply follow the cooking instructions.



Fry at a maximum temperature of 175°C (or lower if possible) as this can help to minimise the formation of acrylamide. Where appropriate, cook for longer at a lower temperature but always ensure foods are properly cooked!



Use the correct frying oil for your frying requirements and use oil management tools to help you manage your oil and change at the appropriate time to maximise oil usage whilst minimising risk.



Display a colour guide to help colleagues prepare food safely. Darker cooked colours may mean higher acrylamide levels - aim for a light golden finish - Go for Gold! And invest in good oil management practices to help understand when oils should be discarded.



Myth busting...

It has been suggested that certain oils and fats allow food to fry quicker or at a lower temperature. This is simply not the case. There is no such thing as a 'low temperature frying oil', instead all oils transfer heat to the food in essentially the same way.

Nor does pure frying oil contain acrylamide. Rather, acrylamide can form when starchy foods are heated to over 120°C. It is the crumbs and fine particles of food which are left in the frying oil after cooking that may contain and continue to create acrylamide in the hot oil. If the frying oil is not skimmed or filtered out, the crumbs and fine particles of food may stick to the next batch of food, raising acrylamide levels.

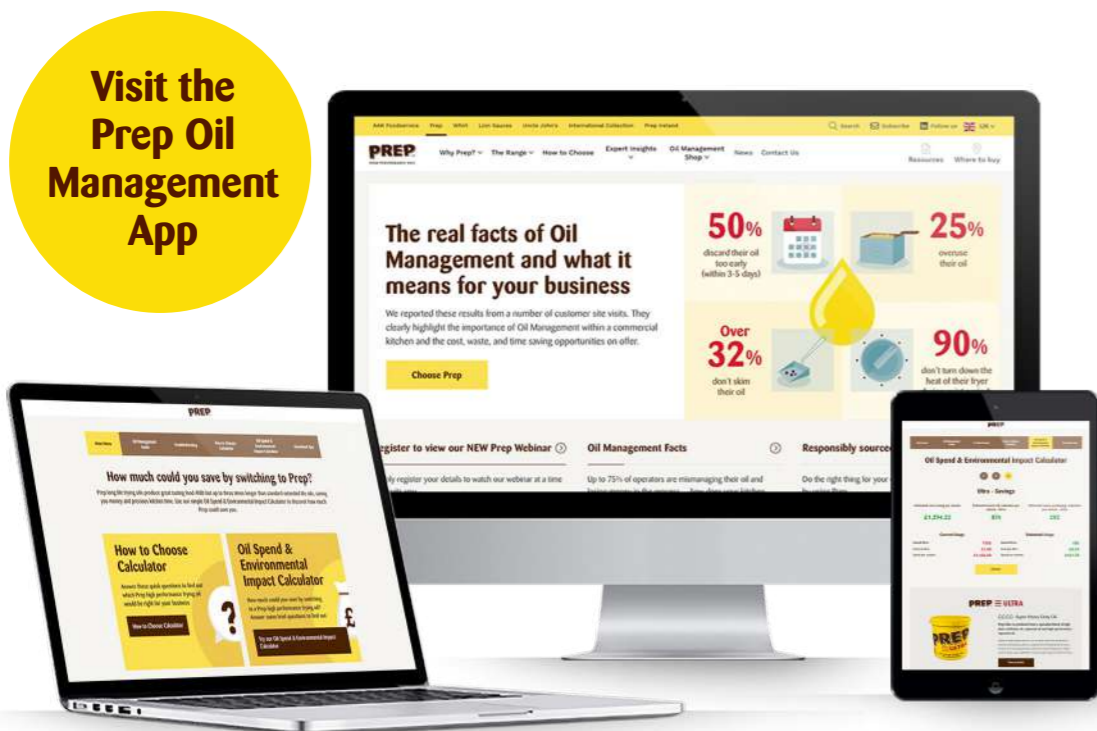
You can help to reduce this risk by following the Prep Guide to Good Oil Management.



The Prep Guide to Good Oil Management...

Following the Prep Guide to Good Oil Management will help you to meet the new EU acrylamide legislation. [You can read all about it here >](#)

Take a look at the Prep Oils app which provides you with all the tools you need to look after your frying oil. It also contains an easy-to-use trouble shooting guide to help provide answers to any oil issues regarding food quality, safety, longevity, equipment and discard.



Choosing the right oil...

Choosing a frying oil is one of the most important decisions you'll make as a caterer. If you have a heavy duty fryer, it would almost certainly make sense to invest in a heavy duty, high performance frying oil. Prep long life frying oil lasts up to three times longer than standard frying oils.* So, if you want to save money, reduce waste and change your oil less often – whilst taking all the necessary steps to mitigate against acrylamide – try Prep! Visit www.prepoils.co.uk/prep/save-with-prep to find out which Prep oil would be best for your business.

*Typical values verified against laboratory OSI tests at 120° to bring oil to discard point. Source AAK International.



Do I only have to worry about fried chips and potato products?

No, in terms of the food you fry, you also need to be careful with breaded products and doughnuts.

Clearly, you can't soak these before they are cooked, but aim for a light golden finish and keep the oil clean. Again, explain the risk to your team and use a colour chart as a guide.

The legislation also relates to roasted potatoes and root vegetables, as well as toast, toasted sandwiches, bakery products and coffee.

[You can access a full list of the products within the scope of this legislation, click here >](#)

Colorguide:





Bread and bakery products

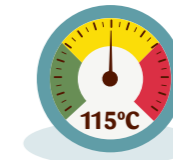
If you make your own bread, morning goods and bakery products you must, insofar as is possible and compatible with your production process and hygiene requirements:



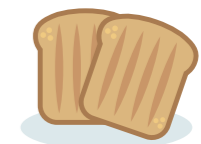
Extend the yeast fermentation time.



Optimise the moisture content of the dough for the production of a product with low moisture content.



Lower the oven temperature and extend the cooking time.



Bake products to a lighter colour endpoint and, where possible, avoid roasting crusts to a dark colour.

When preparing **hot sandwiches**, ensure that they are toasted to the optimal colour.

Follow cooking instructions carefully when finishing pre-packed bread or bakery products.

Where possible use **colour guides**, developed for specific product types, to help achieve the optimum combination of colour and low levels of acrylamide.

Levels of acrylamide in finished products should be monitored, to verify that the mitigation measures taken have been effective in keeping acrylamide below the benchmark level.



Coffee anyone?

You **must** also ensure that the acrylamide level in the coffee you serve is **lower than the benchmark level** recommended by the legislation*.



* Appendices:

COMMISSION REGULATION (EU) 2017/2158 of 20 November 2017

Establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2158&from=EN>





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Prep Oils Website:
www.prepoils.co.uk

To find out more visit: EC website page for more detailed information and advice on acrylamide.

https://food.ec.europa.eu/safety/chemical-safety/contaminants/catalogue/acrylamide_en