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# CARAMEL COLOUR

## WHAT IS CARAMEL COLOUR?

Caramel colour is a water soluble food colouring made by heating carbohydrates, often in the presence of acids, alkalis or salts. It is one of the oldest and most widely used food colourings and can be found in many food products. The greatest use of the colour is in beverages such as colas. There are four classes of caramel colour, depending on how it is manufactured. Class III and Class IV can use ammonia in the preparation; whereas Class I and II cannot.

## WHY IS IT AN ISSUE FOR THE INDUSTRY?

Class III and IV caramel colour may contain 4-methylimidazole (4-Mel) as a byproduct of the Maillard reaction between carbohydrates and amino-containing compounds. 4-Mel is possibly carcinogenic to humans. In January 2014, Consumer Reports measured 4-Mel in a number of soft drinks that contain caramel colour and found two products that exceeded the 29 microgram level, the cutoff in California for adding a cancer warning on a food label. This study elicited a fair amount of media, putting pressure on all food and beverage industries who use caramel colour.

## WHAT ARE THE CANADIAN REGULATIONS?

Caramel colour is permitted in Canada in many food products, including bread and whole wheat bread at levels that meet Good Manufacturing Practice. (<http://www.hc-sc.gc.ca/fn-an/securit/addit/list/3-colour-color-eng.php>)

## WHAT ABOUT OTHER JURISDICTIONS?

United States Food and Drug Administration lists L-cysteine as a GRAS substance and similar to Canada allows levels that meet Good Manufacturing Practices. However, in January 2012, California's Proposition 65 law requires manufacturers to label a product sold within the state with a cancer warning if the level of exposure would be more than 29 micrograms of 4-Mel per day. This level was identified as it was estimated to pose a one in 100,000 risk of cancer.

European Food Safety Authority permits the use of caramel colour (E150a-d) at levels indicated by quantum satis under regulation No 1129/2011. For bread, the caramel colour is permitted in malt bread only.

Food Standards Australia New Zealand permits the use of all classes of caramel colour in bread and baked goods based on Standard 1.3.1.