ILLEGAL DYES

Nick Tomlinson
UK Food Standards Agency

9 May 2003 Sudan I

Background

- Sudan I - red dye used for colouring solvents, oils, waxes, petrol and shoe and furniture polishes.
- Added to chilli powder to enhance colour and increase market value.
- Genotoxic carcinogen, non-permitted food colour in EU.

Background (continued)

- Three producers in India implicated (licenses since suspended) but since found in products from Pakistan, Bangladesh, Turkey etc.
- UK investigations started in May 2003 following RASSF from France, but evidence of contamination going back 4 years at least.

COT Advice on Sudan I

Overall the azo structure, the genotoxicity data and the carcinogenicity data
lead to the conclusion that it is prudent to assume that Sudan I is a genotoxic carcinogen.
Dietary exposure should therefore be
as low as reasonably practicable (ALARP).

31 July 2003

- UK implements EC decision 2003/46/EC
- UK recalls first affected products

Products Affected

Problems encountered

Traceability problems

- few or no records kept
- very complex distribution chains
- widespread use of chilli powder
- long shelf life of products containing chilli

Problems encountered (continued)

- Analytical disputes (need for more consistent methodology)
- All sizes of business affected from multi-nationals to one man businesses
- Not enough resources to check for Sudan contaminated products

April 2004 FVO Mission to UK

- “Actions taken at local level are appropriate.”

July 2004 Sudan IV

February 2005

Action taken to remove illegal dye found in wide range of foods on sale in UK

“Sudan I could contribute to an increased risk of cancer. However, at the levels present the risk is likely to be very small but it is sensible to avoid eating any more. There is no risk of immediate ill health.”

Food Standards Agency Friday 18 February 2005

Cancer-causing dye is discovered in 350 foods

BY CAHAL MILMO

No safe level for dangerous dye in any foodstuff

By Sam Lister
Health Correspondent

Food industry admits that tests for cancer dye are not carried out

By Valerie Elliott
Consumer Editor

Supermarket alert on cancer food dye

By Sam Lister
and Valerie Elliott

SCARE OVER RED DYE WHICH AFFECTS DNA

By MEGAN LLOYD DAVIES

CANCER PERIL IN 359 TOP FOODS

STORES FACE MEGA FINES OVER CANCER FOOD ALERT

How many more timebombs in our food chain?

60 MORE 'CANCER FOODS'

Kids' meals cleared from shelves

Where the danger packs are still on sale

Sixty more foods are added to danger list

April 2005 Para red

Methods of Analysis

- HPLC readily available - allows in house testing
- LC-MS much lower LoD but limited availability - false positives?
- Cost of analysis
- Testing in third countries

UK response

- Requests opinion from EFSA on dyes mentioned in various RASFFs
- Requests consideration by Standing Committee to ensure consistent risk management measures

May 2005 Standing Committee

Agrees provisional limit of detection (LOD) for most illegal dyes similar to Sudan I in spices using HPLC of 0.5 – 1 mg/kg.

Network established, led by UK, to develop analytical methods for p-Red, and similar dyes in food and to improve consistency of results.

Methods of Analysis (2)

- Standard test material produced
- Chilli powder spiked at various levels
- Large number of labs in several Member States participating in trials - HPLC and LC-MS analysis
- Final results being discussed at Standing Committee on 23 June

Conclusions

- Incidents can be fast moving
- Need for risk assessment at beginning of process
- Need agreed detection methods
- Need consistent approach to managing large scale incidents across EU

Conclusions (2)

- The food chain is global and is only as robust as its weakest link
- Need to identify critical points in food supply chain where action should be taken to prevent food incidents
- Getting it wrong can be expensive
- Need international mechanisms for identifying emerging risks

www.food.gov.uk