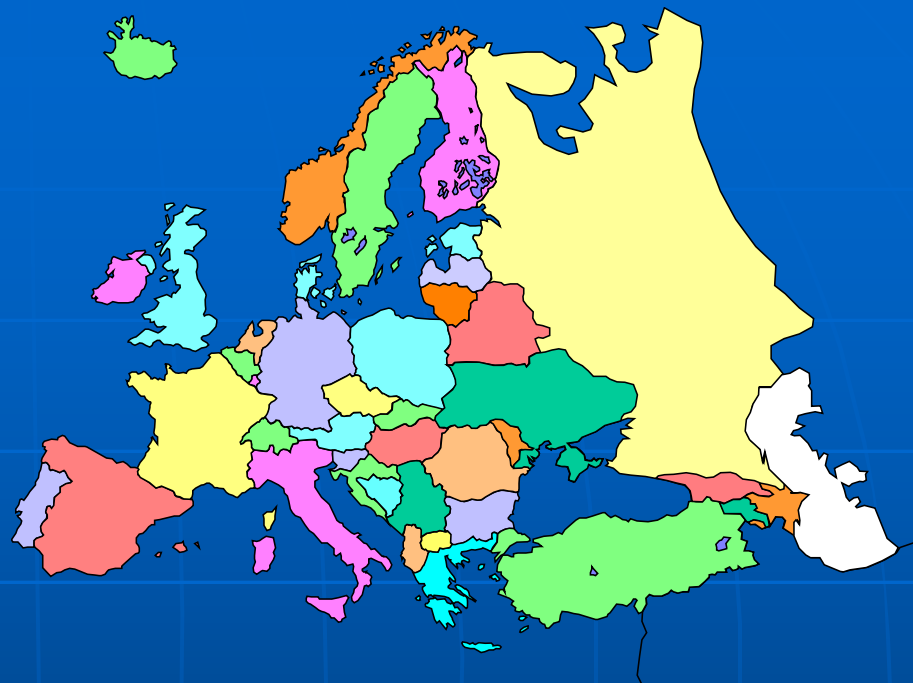


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Roger Clarke

ASTA convention 2006

Website: www.esa-spices.org

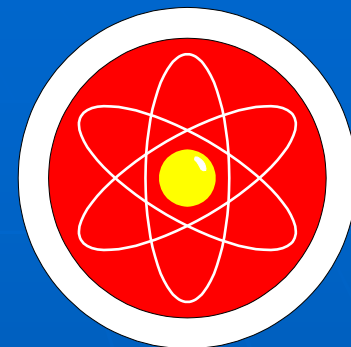


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2005 summary

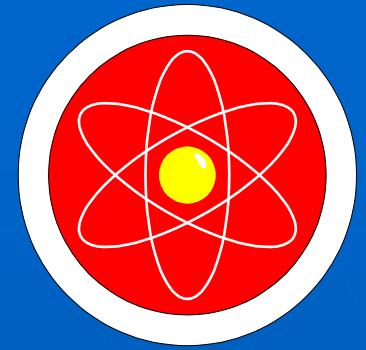
- Biologically Active principles
- Adulteration
- Allergens / Cross contamination
- Traceability
- Product Information
- Ochratoxin A

Flavouring directive



Biologically active principles (BAPs)

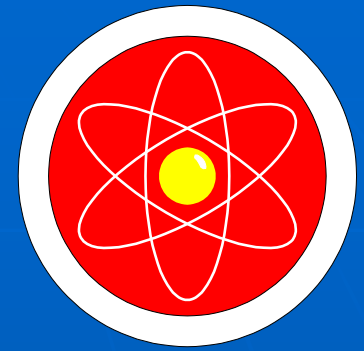
- The scientific perception
- Certain chemicals, in their pure form, are either carcinogenic or potentially carcinogenic when fed to laboratory rats.
- Several of these chemicals are present in foodstuffs and thus their 'dose' should be controlled through legislation



Biologically active principles

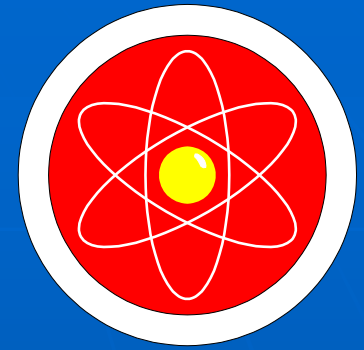
- The flavour industry was a key target as they use these chemicals in their pure form
- As a defense strategy the spice industry was named as these chemicals occur naturally in spices
- Whilst controlling the level of these chemicals in flavours should be easy, control in spices may not be so easy

Biologically active principles



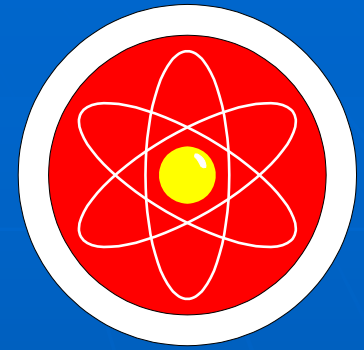
- The chemicals
- Methyl Eugenol
 - e.g. Cloves, Basil, Nutmeg, Star Anise etc.
- Methyl Chavicol
 - e.g. Basil, Chervil, Tarragon, Fennel, Star Anise etc.
- Safrole
 - e.g. Cinnamon / Cassia, Nutmeg, Star anise etc

Biologically active principles



- ESA commissioned an independent research project on BAPs using specialists
- Tarragon was chosen as it has 'high' levels of Methyl Chavicol and is used in some EU countries at high doses.

Biologically active principles

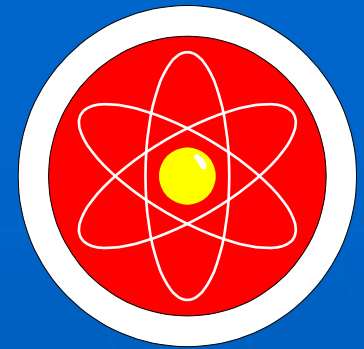


- The research programme
- Both in vivo and in vitro studies were done
- The study took almost 2 years to complete
- Result were concluded late last year and will be published this year.

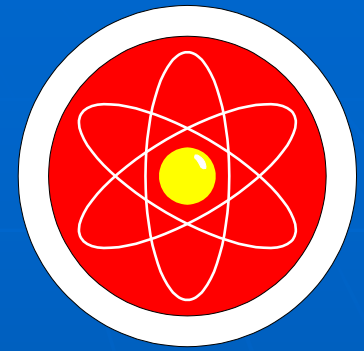


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Biologically active principles



- The research programme results
- The pure chemical was found to be carcinogenic
- When present in Tarragon the same chemical at the same level was found to be non carcinogenic
- When Tarragon and MC are used together Tarragon appears to have an inhibitory effect on the pure chemical



B.A.P's Summary

- The research programme cost > US\$160,000
- It proved that Tarragon is not carcinogenic
- It challenges the 'BAPs' legislation
- It challenges the way in which this type of legislation is drafted
- Expensive cost for one minor herb but positive benefits for the trade in general

The hottest topic of all

- Sudan adulteration of Chilli powder
- First hit the EU rapid alert system 9th May 2003
- Still being mentioned in 2006
- Newspapers have covered the story for over two years
- So what did we learn?



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Communication

- Traditional communication tools are not enough
 - Relying on trade association
 - Government notices
 - Rapid alert system
- We have to consider
 - People outside the trade associations
 - Media perception
 - Customer concerns
 - Scientific community
 - Legislators' agenda
- Public recalls only result in 20 - 40% returns at best

Recipe modifications

- Major retailers and food producers will react to press news
- With the chilli powder crisis several requests came through to remove all African products from all formulations







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Co-operation

- In hindsight all stakeholders should have met on a regular basis
- Relevant data was not collected and made available to all concerned
- The forum for this to take place was not fully developed / established
- IOSTA has the potential to fill this void

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February 20th

75 kg Chilli
powder in stock
in UK

Cost \$ 232.50



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March 29th

Recall started on
all products





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Recall costs

- Recall charge for disposal at store \$ 7,600
- Cost of products returned from retailers \$ 206,500
- Cost of products returned from distributors \$ 192,500
- Logistics cost of recalls \$ 16,470
- Loss of profit calculation \$ 12,300
- Replacement stock surcharges \$ 26,250
- Retailer administration costs \$ 38,500
- Recall notice / advert \$ 15,000
- Collation point storage charges \$ 5,500
- Company internal costs (wages / expenses) \$ 10,250
- **\$232 of chilli over 39 days cost a total of \$531,870**

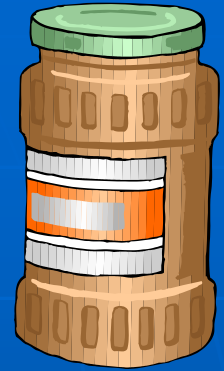


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Ongoing 'costs'

- In one company 40% of the workforce lost their jobs as the customer changed their supplier of raw material
- Product testing will be required by many customers for many years to come, even though the 'problem' has been 'eliminated'
- Bad interpretation of 'due diligence' has driven multiple testing

Hot topics



- **Allergen Labeling requirements**
- Potential cross contaminants still an issue
Celery, Mustard, Sesame and their derivatives
- SO₂ above 10 p.p.m. must be declared
- Cinnamon not mentioned in legislation

Hot topics



- **Traceability**
- From field to plate principle
- Allows product segregation
- Relies on product labelling
- Limits product recalls
- Helps quality development
- Packaging included late 2006

Information

- **Retailer demand for information is at an all time high**
- Working on harmonising the format
- Gives a uniform approach
- Should help reduce transcription errors
- Speeds up the supply of data

Ochratoxin A



- Current EU legislation
 - 466/2001 Cereals, fruit juice, coffee, wine, baby foods etc.
 - Limits between 1 and 10 ppb
- Spice are not covered
 - Results of EU investigation will be given in 'contaminants' presentation
 - Still no official method
 - Latest EU legislation covers the sampling of spices



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■ THANKS FOR LISTENING

- Happy to take questions, as long as they are not too difficult!

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