



Missed opportunities for reducing the acrylamide exposure of consumers

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Replace Recommendations

- EFSA concludes dietary AA is of concern
 - In 12 years next to no improvement for consumers
 - More detailed investigations should not be a priority
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- The main recommendation should be the evaluation of options for mitigation and their effects on consumer exposure

Rösti



Source:
<http://www.klzh.ch>,
Lebensmittel,
Merkblätter,
Acrylamid:
Hintergründe und
Tipps

Exposure assessment is biased

- Home cooking underestimated
- A single portion (250 g) of Rösti can contain 500 – 1250 μg AA; every third day for an adult (60 kg) results in 2.8 – 6.7 $\mu\text{g}/\text{kg}$ b.w./day from Rösti alone
- The 95th percentile for adults derived in the opinion is at most 2 $\mu\text{g}/\text{kg}$ b.w./day

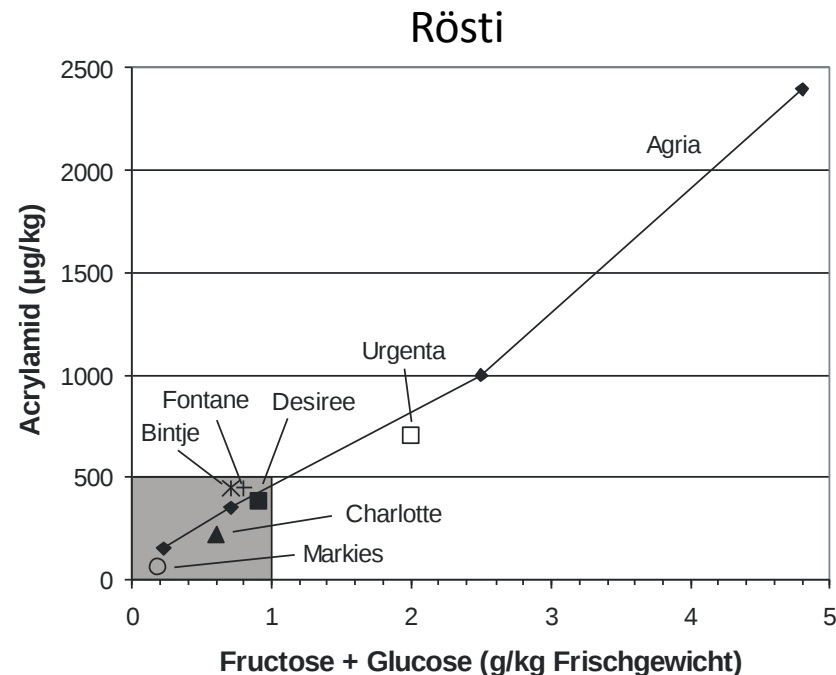
Mitigation: Potatoes

- Regulation of reducing sugars in potatoes for certain uses i.e. chips (french fries) and rösti (fried potatoe products)

- Reducing sugars correlate with AA content
- Storage at 9°C prevents high sugar contents
- Choice of potato can have a real impact on AA exposure
 - chips <100 µg/kg AA are feasible
 - Mean (Chips) in opinion 308 µg/kg AA
 - 140 µg/kg



1100 µg/kg



Mitigation: Ammonium and fryers

- Ammonium catalyses AA formation
 - AA reduction by
 - Avoiding ammonium (bi)carbonate
 - Use of asparaginase
- AA is formed at the end of frying
 - Decreasing temperature during frying reduces AA

Summary

- Main recommendation should focus on how effective mitigation can be achieved
- More accurate exposure assessment is unnecessary
- Suggestions for mitigation measures
 - Control of reducing sugars in potatoes
 - Asparaginase for ammonium carbonate dependant food
 - Improved Fryers

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Further reading

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