



FoodMagnifier App Contaminants & Nutrients in Food



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- Many apps provide information about nutrients in food with the aim of positively influencing dietary choices
- So far, there is no app that also provides information on potentially undesirable substances
- Communicating food-related risks is a particular challenge \bullet

Objective

- Transparent communication of data on potentially harmful substances
- Positive influence on diet by reducing the intake of undesirable substances
- Target group: Interested public and other stakeholders (e.g. risk managers)

Go to FoodMagnifier by scanning the QR code



Methods

- Development within the FNS-Cloud project¹ (2019 2023)
- Basic structure based on Total Diet Study (TDS) methodology
- Example data: German pilot TDS (TDS-Exposure-Project²)
- Selected substances: aluminum, lead, copper, manganese and mercury

Result: FoodMagnifier app

- Available at <u>www.foodmagnifier.eu</u>
- Search functions for substances or (prepared) foods
- Comparisons between foods or substances
- Background information on substances and population intake levels, as well as further literature (Fig. 2)
- Usability Test 1 project partners (N=14): Technical implementation, comprehensibility (2022)
- Usability Test 2 German speaking end users (18 >65 years) (N=42): lacksquareTechnical implementation, comprehensibility, risk communication (2023)



Fig 1: Development steps of the FoodMagnifier app.

Online tutorial and in-app help functions (Fig. 3)

Substances Q Show results Aluminium Lead Mercury Conner	Muesli And Similar Grains and grain-based products	About the substance About the substance Imminium is one of the most common elements on Inth ¹ and therefore naturally occurring in soil. It is
Aluminium Lead Mercury	18	About the substance uminium is one of the most common elements on wrth ¹ and therefore naturally occurring in soil. It is
Lead Mercury	16	uminium is one of the most common elements on with ¹ and therefore naturally occurring in soil. It is
Mercury	14 🔴	rth ¹ and therefore naturally occurring in soil. It is
Conner		
Copper	6 12	eased by natural processes and numan activities th as mining and industrial uses. Humans take in
Manganese	01/B	iminium mainiy via food, aluminium-containing od additives and food contact materials ² .
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	4 06	
	0.4 🔴 🔮 🔮	Intake and reference values >
	02	Contributors to dietary intake 🕥 >
	Al Ha Cu Ma Ph	
	Substance	Literature >
	🔵 Muesli Ard Similar 🔵 Hanana 🕚 Moyt Bala	
	Manganese	Manganese

Fig. 2: Selected screenshots of the FoodMagnifier app (from left to right: food search, substance search, food/substance comparison, background information on the context of the content of substances with the risk assessments).

¹ www.fns-cloud.eu ² www.tds-exposure.eu



Conclusions

Development of an application that

Fig. 3: Selected screenshots of the help functions in the FoodMagnifier app (from left to right: Getting Started tutorial (inapp), context-related help buttons ("?") (in-app), interactive online tutorial with two application scenarios).

FNS-Cloud Food Nutrition Security

Food Nutrition Security Cloud (FNS-Cloud) has received funding from the European Union's Horizon 2020 Research and Innovation programme (H2020-EU.3.2.2.3. – A sustainable and competitive agri-food industry) under Grant Agreement No. 863059 – www.fns-cloud.eu

- makes data on (undesirable) substances in food accessible to the general public
- presents complex information on levels of potentially hazardous substances in a contextual and comprehensible way

Outlook

- Use by other data owners (TDS data)
- Further development for further content data (e.g. monitoring data, nutrients)
- Further development for more complex applications (e.g. individual exposure)

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