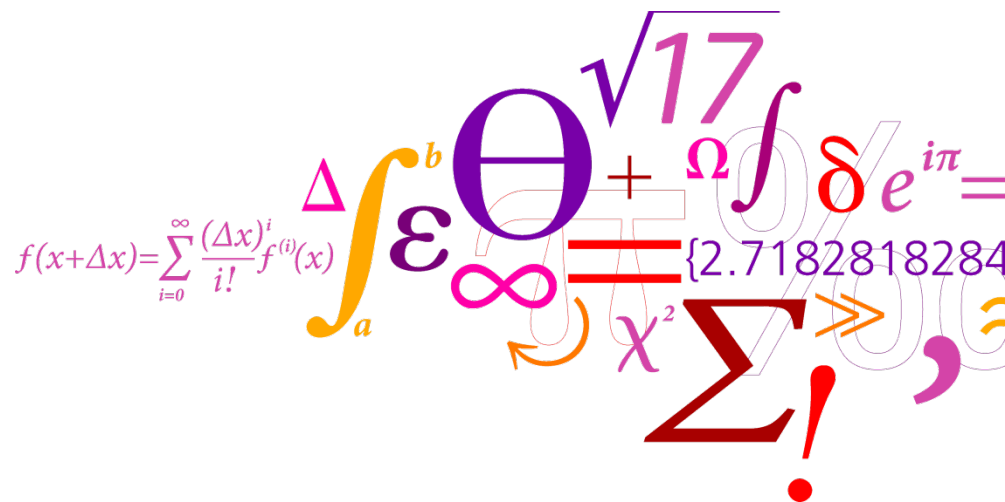


RAKIP

Risk **A**ssessment Modelling and **K**nowledge **I**ntegration
Platform

RAKIP

risk assessment modelling & knowledge integration platform



RAKIP

risk assessment modelling & knowledge integration platform

anses
French agency for food, environmental
and occupational health safety



BfR
Bundesinstitut für Risikobewertung

DTU Food
National Food
Institute



- Initiative of ANSES, BfR and DTU Food
- Background:
 - Many risk assessment models and model components are developed and remain unused in the global community
 - Usage is hampered by heterogeneity in tools, lack of harmonisation in model annotation and lack of suitable information exchange formats
- Objective:
 - Facilitate re-use of food safety risk assessment models
 - Facilitate efficient generation of new high quality risk assessments

Achievements (January 2017 – December 2018)

RAKIP Web Portal:

<https://foodrisklabs.bfr.bund.de/rakip-web-portal/>

- ***harmonized controlled vocabulary*** for terms and concepts relevant for risk assessment modelling

Allows an understanding of each others models, and exchange between models

- model (and data) annotation with the ***open information exchange format FSK-ML***

The “English” of risk assessment model codes

- ***open source software tools*** supporting FSK-ML
- a first ***RAKIP model repository*** demonstrator

Allows sharing, finding and execution of models

RAKIP vs EFSA's Knowledge Junction

RAKIP-Web [Upload of Harmonized Models ✓](#) [Online Creation of Harmonized Models ⚙](#)

Search

Check	Model Name	ModelID	Software	Environment	Hazard	Execution Time	Upload Date	Details
<input type="checkbox"/>	Fitting Distribution To Microbial Counts	Duarte_R	FSK-Lab	undefined	undefined	00:15:04	2018-10-09 09:46	Details
<input type="checkbox"/>	Nauta consumer phase model for Campylobacter in chicken meat	CPM2011Nauta	R	Poultry — chicken, geese, duck, turkey and Guinea fowl — ostrich, pigeon Meat	Campylobacter jejuni	00:00:06	2018-10-19 18:12	Details
<input type="checkbox"/>	FAO/WHO consumer phase model for Campylobacter in chicken meat	CPM2011FAO/WHO	R	Poultry — chicken, geese, duck, turkey and Guinea fowl — ostrich, pigeon Meat	Campylobacter jejuni	00:00:07	2018-10-19 18:12	Details
<input type="checkbox"/>	Christensen consumer phase model for Campylobacter in chicken meat	CPM2011Christensen	R	Poultry — chicken, geese, duck, turkey and Guinea fowl — ostrich, pigeon Meat	Campylobacter jejuni	00:00:11	2018-10-19 18:10	Details
<input type="checkbox"/>	Brynstedt consumer phase model for Campylobacter in chicken meat	CPM2011Brynstedt	R	Poultry — chicken, geese, duck, turkey and Guinea fowl — ostrich, pigeon Meat	Campylobacter jejuni	00:00:53	2018-10-19 17:44	Details
<input type="checkbox"/>	Dose-response model for norovirus (small matrix)	NoV_Dose_response	R	Lettuce Tomatoes Meat, preparations of meat, offals,	norovirus (Norwalk-like	00:00:15	2018-08-27	Details

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Knowledge Junction

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February 25, 2019 (13) [Details](#) [Open Access](#)

Tables and Figures complementing the European Union Summary Report on Antimicrobial Resistance in Zoonotic and Indicator Bacteria from Humans, Animals and Food in 2017
European Food Safety Authority, European Centre for Disease Prevention and Control.
All tables, figures and maps produced for the European Union Summary Report on Antimicrobial Resistance in Zoonotic and Indicator Bacteria from Humans, Animals and Food in 2017 are provided.
Updated on February 26, 2019. [View](#)

December 15, 2018 (10) [Details](#) [Open Access](#)

Advice on the suitability of VR 2827-3 as a disinfectant for slaughtering equipment in the meat processing industry
Office for Risk Assessment and Research, Netherlands Food and Consumer Product Safety Authority.
BuRO advises the NVWA to impose strict requirements on a cattle slaughterhouse that wants to perform a trial with an alternative disinfectant, i.e. VR 2827-3. The slaughterhouse is asked to demonstrate in a step-wise approach that the alternative disinfectant is as effective as water of 62 degrees C.
Updated on February 20, 2019. [View](#)

December 1, 2017 (11) [Details](#) [Open Access](#)

Advice on 2,4-dinitrophenol (DNP)
Office for Risk Assessment and Research, Netherlands Food and Consumer Product Safety Authority.
Dutch Customs has intercepted different parcel post shipments containing 2,4-dinitrophenol (DNP) in capsules. As a result of the find, the Office for Risk Assessment & Research (BuRO) was requested to issue an advice on the harmful effects of DNP on public health. BuRO recommends to prevent caps.
Updated on February 20, 2019. [View](#)

Keywords

- [Option](#) (723)
- [Germany](#) (342)
- [Food](#) (253)

- **FAIR Model Repository**
- **Quality controlled**
- **Services:**
 - **model execution / simulation**
 - **export to EFSA's KJ**
 - **online generation or upload of FSK-ML model files**
 - **combining models**

- **Data Repository**
- **No model interoperability**
- **No computational services**

What does RAKIP add to other tools and model libraries?

- Share, combine and execute models
 - Provide full transparency and reproducibility of model-based simulations, as models can be executed online and on local computer with different free software tools, all simulation results and simulation settings stored with model
- Promote quality control through
 - Standardized information exchange format (and its annotation rules)
 - Applicability to different scripting languages
 - Open source software code

Plans and ambitions

- Setting up the “RAKIP Initiative” => enabling other agencies to join
- Develop, maintain and expand the RAKIP Web Portal, e.g. support other risk assessment modelling domains (CRA, AMR, RBA etc.)
- Increase community contributions and adoption
 - Promote the usage of models that are available
 - Increase computational resources to run simulations
 - Support modellers that are willing to share their models
 - Provide support for additional model languages / tools (@Risk, R, Matlab)

Activities 2019

- Pre-conference workshop at ICPMF11, 17 September 2019, Braganca, Portugal
- Development of new features for open source software tools (R, FSK-Lab)
- New models in RAKIP model repository
- RAKIP model repository goes into „production“ (i.e. solving remaining legal and technical issues)

RAKIP invites other institutions to join the project

- The RAKIP group would like to extend the collaboration to involve other MS institutions.
- If interested, please contact
 - Maarten Nauta (maana@food.dtu.dk)
 - Matthias Filter (Matthias.Filter@bfr.bund.de)
 - Laurent Guillier (Laurent.GUILLIER@anses.fr)