

# EuroFIR™ Web Service for Dietary Reference Values

Version 0.1

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## Description of EuroFIR™ web-service for Dietary Reference Values (Input, Output)

Dietary Reference Values (DRVs) are defined by a set of nutrient recommendations and reference values, which include

- Population Reference intake (PR): level of intake adequate for virtually all people, i.e. an optimal intake for the population as a whole;
- Average Requirement (AR): level of intake adequate for half of the people, assuming a normal distribution of requirements;
- Lower Threshold intake (LT): level of intake below which, on the basis of current knowledge, almost all individuals would have an inadequate intake;
- Upper Limit of intake (UL): the maximum level of chronic daily intake of nutrients unlikely to have adverse health effects [EFSA, 2010].

DRVs are defined for various age groups (babies, toddlers, children, adolescents, adults, seniors), considering sex (male/female) and health status (pregnancy, breast feeding) requirements. Countries may have groups defined in different ways.

In general, DRVs for different nutrients are within the same ranges of values for age groups, in most European countries differ significantly only in few nutrients (like in vitamin D or in vitamin A) [Doets *et al.*, 2008]. The current version includes DRVs for the following European countries:

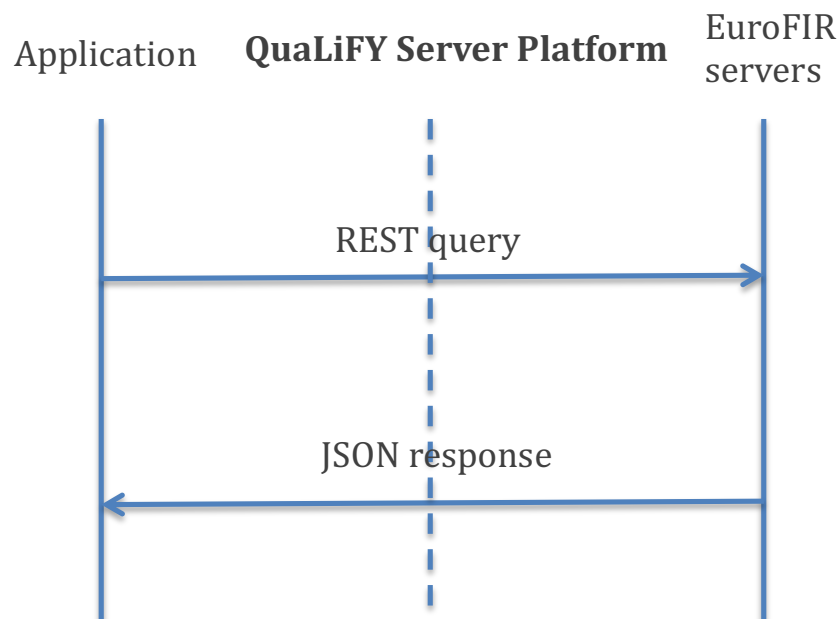
- Austria, Switzerland, Germany, Slovenia, Czech Republic (Reference values for nutrient intake D-A-CH<sup>1</sup>), 2000
- United Kingdom (British Nutrition Foundation), 2012
- Italy (LARN, SINU), 2014
- Nordic countries (Nordic Nutrition Recommendations, 2012)
- Europe (EFSA Scientific Opinions):
  - EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for Iodine, 2014
  - EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for pantothenic acid, 2014

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<sup>1</sup> DACH stands for the German-speaking countries: Germany, Austria and Switzerland.

- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for biotin, 2014
- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for Vitamin C, 2014
- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for manganese, 2013
- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for molybdenum, 2013
- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for fluoride, 2013
- EFSA Panel on Panel on Dietetic Products Nutrition and Allergies, Scientific Opinion on Dietary Reference Values for niacin, 2014
- Protein and Amino Acids Requirements in Human Nutrition, WHO/FAO/UNU Expert Consultation, 2007

The EuroFIR web-service for DRVs provide an interface for reference values defined for above listed countries. A request is based on REST html query with JSON response, which returns DRVs with regards to query parameters (“component\_code” and “eng\_name”).



### **What are targeted clients of web service / API?**

DRVs web-service clients include information systems that require DRVs for research or commercial aims.

### **Describe potential usage of your web service using an example**

DRVs can be used as a basis for building of nutritional recommendation in food labelling, for establishing food-based dietary guidelines (FBDG), and meal planning. FBDG translate nutritional recommendations into messages about foods and diet, and can guide consumers on what to eat and help them make healthy dietary choices.

### **How does your web service add to the overall goal of QSP?**

DRVs web-service can help large and SMEs as well as researchers to access and apply national DRVs through an open-innovation platform with a wide range of web-service.

### **Acknowledgements**

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### **References**

EFSA Panel on Dietetic Products, Nutrition, and Allergies (2010). Scientific Opinion on principles for deriving and applying Dietary Reference Values. *EFSA Journal*, 8(3):1458.

Doets EL, de Wit LS, Dhonukshe-Rutten RA, Cavelaars AE, Raats MM, Timotijevic L, Brzozowska A, Wijnhoven TM, Pavlovic M, Totland TH, Andersen LF, Ruprich J, Pijls LT, Ashwell M, Lambert JP, van 't Veer P, de Groot LC (2008). Current micronutrient recommendations in Europe: towards understanding their differences and similarities. *European Journal of Nutrition*, 47(1): 17-40.