



The EUROLIR Project

Linking European Food Composition
Databases Using The LanguaL Food Description Thesaurus

Anders Møller

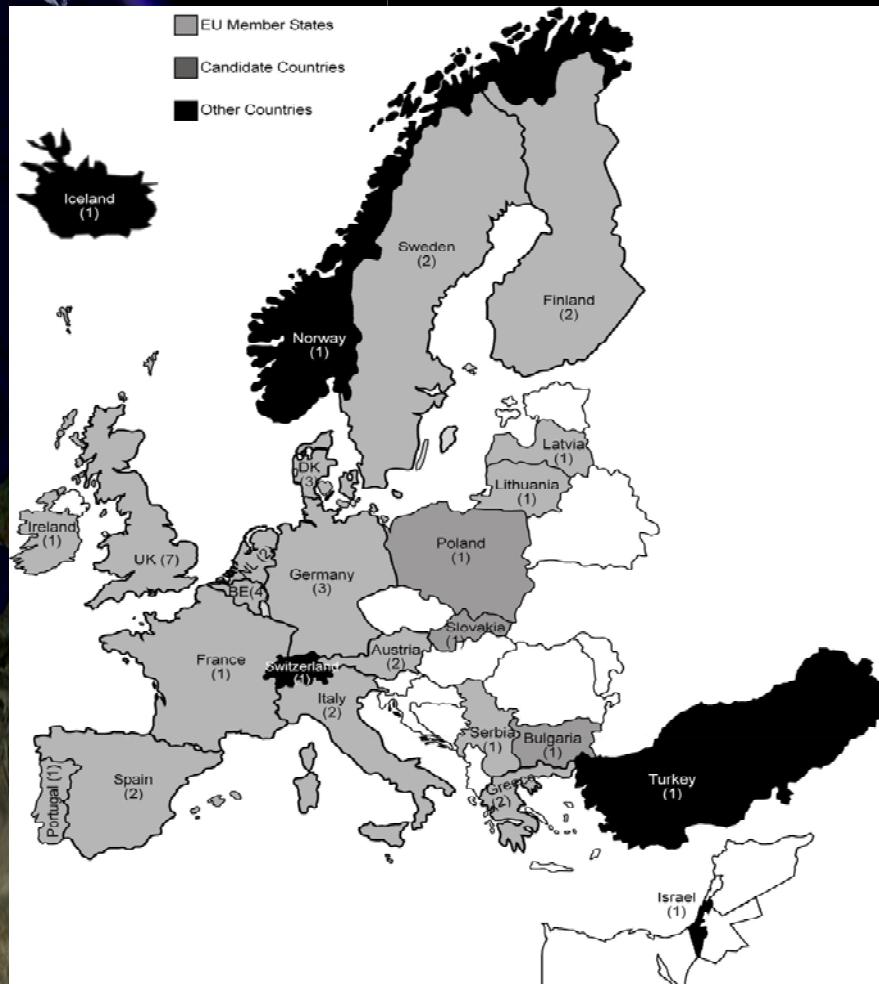
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on behalf of the EuroFIR Consortium

European Food Information Resource



■ Consortium:

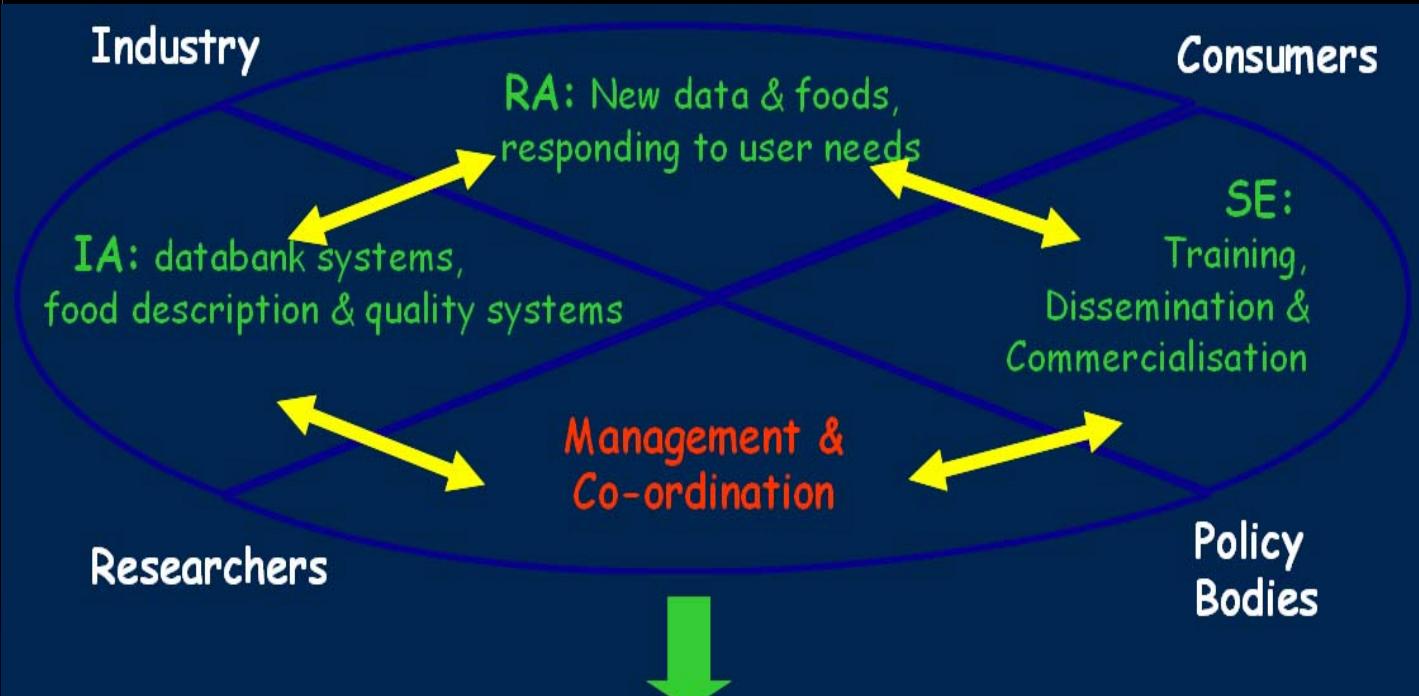
- 46 centres from 25 countries including:
 - 27 database compilers
 - 5 SMEs (15% budget)

■ Other stakeholders:

- WHO, FAO, CIAA, BEUC, EFSA & food industry (SMEs)
- Additional collaborating centres from USA, South Africa, Canada, Australia, New Zealand & Brazil

■ Funded by the European Commission

The EuroFIR Network and its main objective



**Delivering a comprehensive, coherent and validated
databank for nutrients & bioactive compounds**





European Food Composition Information

European Food Composition on the Internet





The Creation of Common EuroFIR Thesauri

- **Common description of foods and values in European food composition databases**
 - Food Description
 - Common indexing of foods
 - Value Documentation
 - Common component definitions (with cross-reference to ChEBI, CAS, INFOODS, legal definitions, etc)
 - Common analytical method description
 - Common bibliographic database (CitExplore)
- **In addition**
 - Common XML template for data transfer
(The EuroFIR Food Data Transfer Package)

Langual Food Product Indexer

- A. PRODUCT TYPE [A0361]
- + FOOD ADDITIVES [A0323]
- + PRODUCT TYPE, CODEX ALIMENTARIUS [A0352]
- PRODUCT TYPE, EUROPEAN UNION [A0356]
- + CIAA FOOD CLASSIFICATION FOR FOOD ADDITIVES [A0357]
- + EUROCODE 2 FOOD CLASSIFICATION [A0642]
- EUFIR FOOD CLASSIFICATION [A0777]
 - + BEVERAGE (NON-MILK) [A0840]
 - + EGG OR EGG PRODUCT [A0790]
 - + FAT OR OIL [A0805]
 - + FRUIT OR FRUIT PRODUCT [A0833]
 - GRAIN OR GRAIN PRODUCT [A0812]
 - + BREAD [A0817]
 - BREAKFAST CEREAL [A0816]
 - FINE BAKERY WARE [A0821]
 - FLOUR OR STARCH [A0813]
 - PASTA [A0815]
 - RICE OR OTHER GRAIN [A0814]
 - SAVOURY CEREAL DISH [A0822]
 - + MEAT OR MEAT PRODUCT [A0793]
 - + MILK, MILK PRODUCT OR MILK SUBSTITUTE [A0778]
 - + MISCELLANEOUS FOOD PRODUCT [A0852]
 - + NUT, SEED OR KERNEL [A0823]
 - + PRODUCT FOR SPECIAL NUTRITIONAL USE OR DIETARY SUPPLEMENT [A0801]
 - + SEAFOOD OR RELATED PRODUCT [A0801]
 - + SUGAR OR SUGAR PRODUCT [A0835]
 - + VEGETABLE OR VEGETABLE PRODUCT [A0825]
 - + EUROPEAN FOOD GROUPS (EFG) [A0690]
 - PRODUCT TYPE, NOT KNOWN [A0001]
 - PRODUCT TYPE, OTHER [A0004]
 - + PRODUCT TYPE, USA [A0289]
- B. FOOD SOURCE [B1564]
 - + ALGAE, BACTERIA OR FUNGUS USED AS FOOD SOURCE [B1215]
 - + ANIMAL USED AS FOOD SOURCE [B1297]
 - + CHEMICAL FOOD SOURCE [B1041]
 - FOOD SOURCE NOT KNOWN [B0001]
 - + LIQUID AS FOOD SOURCE [B2974]
 - + PLANT USED AS FOOD SOURCE [B1347]
 - + C. PART OF PLANT OR ANIMAL [C0116]
 - + PHYSICAL STATE, SHAPE OR FORM [C01121]

Description
Right-Click Grid for Menu

Indexed Food Data Set [7]

- DK 2005
- USDA SR8**
- DK Test
- USDA SR18
- BASIS Processed foods
- DK Test 2

Foods in Data Set [4349]
Right-Click Grid for Menu

FID	OK	R	Original food name	English name
08053	*	R	100% BRAN CEREAL	
08054	*	R	100% NATURAL CEREAL	
08056	*	R	100% NATURAL CEREAL WITH RAISINS	
08055	*	R	100% NATURAL CEREAL, WITH APPLE AND RAISINS	
08028	*	R	40% BRAN FLAKES CEREAL, KELLOGG'S	
08029	*	R	40% BRAN FLAKES CEREAL, POST	
08153	*	R	40% BRAN FLAKES, RALSTON PURINA	
15156	*	R	ABALONE, MIXED SPECIES, FRIED [HAN]	

Langual Descriptors for Selected Food
Right-Click Grid for Menu

A0813
 Active

Term FLOUR OR STARCH

Related terms

- MILLED GRAIN OR STARCH PRODUCT (U.S.) [A0149]**
- 03 FLOUR (EFG) [A0693]
- 065 CEREAL GRAIN MILLING FRACTIONS (CF) (CCPR) [A0694]

Synonyms

- milled grain or starch product

Scope Note Classification

Additional information + Add tag

EFG group 03. Examples: wheat flour, wholemeal, substitute flours and starches, wheat flour, patent, soya flour, rye flour, whole, potato flour, cornflour, carob flour, rice flour, arrowroot, buckwheat flour, tapioca

Ready

European LanguaL food indexing

EuroFIR datasets

	# Foods
Belgium_NUBEL (2006-03-31)	945
Bulgaria_NCH (2006-06-30)	727
Denmark_DFVF (2006)	1 461
Finland_FINELI (2006)	1 530
France_AFSSA (2006-10-01)	1 035
Germany_BFEL_BLS (2006-08-03)	1 034
Greece_NKUA (2007-01-22)	900
Iceland_ISGEM (2006-07-01)	942
Israel_BGU (2007-02-04)	1 925
Italy_CSPO (2006-06-26)	1 052
Italy_INRAN (2006-07-26)	900
Netherlands_NEVO (2006-07)	776
Norway_UiO (2007-01-16)	1 188
Poland_NFNI (2007-01-03)	932
Portugal_INSA (2006-08-04)	789
Slovakia_FRI (2006-06-30)	1 010
Spain_CESNID-INYTA (2006-11-22)	658
Sweden_NFA (2007-03-26)	551
Turkey_TUBITAK (2007-01-18)	980
United Kingdom_IFR (2006-10-31)	1 702

- **20 national data sets
=> 21 037 indexed foods**

- **Specialized data sets**

- **EuroFIR BASIS**
(bioactive substances in foods)

- **INFORMALL**
(information on allergenic foods)

- **GEMS/Foods**
(WHO/FAO Global Environmental Monitoring System)



Langual - Search Langual Thesauri - Systematic Display - Windows Internet Explorer

http://www.langual.org/search_langual_thesauri.asp?termid=B1470&search=F&searchfor=&openstr=B1470_B1006_B1057_f

Live Search

SnagIt Links Google Google Scholar FishBase GRIN ITIS Mansfeld's Webster's Wikipedia

Page Tools ?

LANGUAL - an international framework for food description! EuroFIR

THE LANGUAL 2007 THESAURUS - SYSTEMATIC DISPLAY - EUROFIR TEST APPLICATION

Descriptor AVOCADO [B1470]

Scope note

Additional Information

Scientific family	Lauraceae
Scientific name	<i>Persea americana</i> Mill. [BASIS]
GRIN nomen	27393
Mansfeld taxid	15043



Showing 63 terms Close expanded terms Search

Search in tree

- + A. PRODUCT TYPE [A0361]
- B. FOOD SOURCE [B1564]
 - + ALGAE, BACTERIA OR FUNGUS USED AS FOOD SOURCE [B1215]
 - + ANIMAL USED AS FOOD SOURCE [B1297]
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 - PLANT USED AS FOOD SOURCE [B1347]
 - + FRUIT-PRODUCING PLANT [B1140]
 - + GRAIN OR SEED-PRODUCING PLANT [B1047]
 - + PLANT ACCORDING TO FAMILY [B3357]
 - + PLANT FOR MEDICINAL USE [B3359]
 - + PLANT USED AS FODDER [B3358]
 - + PLANT USED FOR PRODUCING EXTRACT OR CONCENTRATE [B1013]

Internet 100%

Google

EuroFIR

6

Search FTC	Descriptor	Original food Name	Food Name in English
B1470	AVOCADO		
FoodID	Database Source	Original food Name	Food Name in English
204	BASIS Food Plants 2003	Avocado pear	Avocado pear
<input type="checkbox"/> 11057	FI Fineli	AVOKADO KUORITTU, KIVETÖN	AVOCADO WITHOUT SKIN AND STONE
<input type="checkbox"/> 424	FI Fineli	AVOKADO PUNNITTU KUORINEEN JA KIVINEEN	AVOCADO WITH SKIN AND STONE
<input type="checkbox"/> 3328	FI Fineli	AVOKADOKASTIKE GUACAMOLE	AVOCADO SAUCE GUACAMOLE
782	IS Iceland 2004 test	AVÓKADÓ	Avocado, raw
<input type="checkbox"/> 1_001	SE Sweden 2004	Avokado	Avocado
<input type="checkbox"/> 0011	DK Denmark 2005	AVOCADO, rå	Avocado, raw
<input type="checkbox"/> 04581	USDA SR19	AVOCADO OIL	AVOCADO OIL
<input type="checkbox"/> 09038	USDA SR19	AVOCADO, RAW, CALIFORNIA	AVOCADO, RAW, CALIFORNIA
<input type="checkbox"/> 09037	USDA SR19	AVOCADO, RAW, CALIFORNIA OR FLORIDA	AVOCADO, RAW, CALIFORNIA OR FLORIDA
<input type="checkbox"/> 09039	USDA SR19	AVOCADO, RAW, FLORIDA	AVOCADO, RAW, FLORIDA
<input type="checkbox"/> 21088	USDA SR19	TOSTADA WITH GUacamole, FROM FAST FOOD RESTAURANT [HANDBOOK 8--RECIPE FROM PRINTED COPY.]	TOSTADA WITH GUacamole, FROM FAST FOOD RESTAURANT [HANDBOOK 8--RECIPE FROM PRINTED COPY.]
4	InformAll 2005-02-24	Avocado	Avocado
13004	FR France 2003	Avocat, pulpe, frais	Avocado, pulp, raw
17100	FR France 2003	Huile d'avocat	Avocado oil
44183	Sainsbury's Product Details	Fresh Guacamole Dip	Fresh Guacamole Dip
41	FR Polyphenols 2006	Avocat	Avocado

Submit
request



- › Food Composition Data
 - Search food data
 - Search food name
 - Alphabetical list
 - Search food group
 - Component list
- About food data
- Download food data
- Use of food data
- Changes in data
- Special lists
- Food data history
- Norfoods
- Langual
- EuroFIR
- Links

FCDB no. 0011

Avocado, raw

Avocado, rå

Persea americana Miller

Refuse: 29%

Content pr. 100 g	Unit	Content	Variation	No.	Source
Energy	kJ	669			00050
Protein, total [NCF: 6.25]	g	1.9	1.7 – 2.2	4	05165
total-N	g	0.304	0.272 – 0.352	4	05165
Fat, total [FACF: 0.956]	g	13.1	10.3 – 19.9	7	S0063
saturated fatty acids	g	1.54			00050
monounsaturated fatty acids	g	9.87			00050
polyunsaturated fatty acids	g	1.14			00050
Carbohydrate, total	g	11.7	10.6 – 14.0	4	05165
carbohydrate, available	g	6.5			00050
added sugar	g	0			00000
dietary fibre	g	5.20	4.5 – 5.7	4	05165
Alcohol	g	0			00000
Ash	g	2.8	1.7 – 3.7	4	05165
Moisture	g	68.0	63.2 – 71.8	4	05165
Vitamin A	RE	8			00050
retinol	µg	0			00802
β-carotene eq.	µg	100	60 – 440		00802
Vitamin D	µg	0		17	02101
D3 cholecalciferol	µg				
D2 ergocalciferol	µg				
25-hydroxycholecalciferol	µg				
Vitamin E	α-TE	1.30			00050
alpha-tocopherol	mg	1.30	1.07 – 1.61	6	00919
Vitamin K	µg	8			00801
Vitamin B1, thiamin	mg	0.100			00802
Vitamin B2, riboflavin	mg	0.100			00802
Niacin equivalents	NE	1.35			00050
niacin	mg	1.0			00802
tryptophan	mg	0.78			00050
Vitamin B6	mg	0.420			00802
Pantothenic Acid	mg	1.07			00802

 Fødevaredatabanken

Google

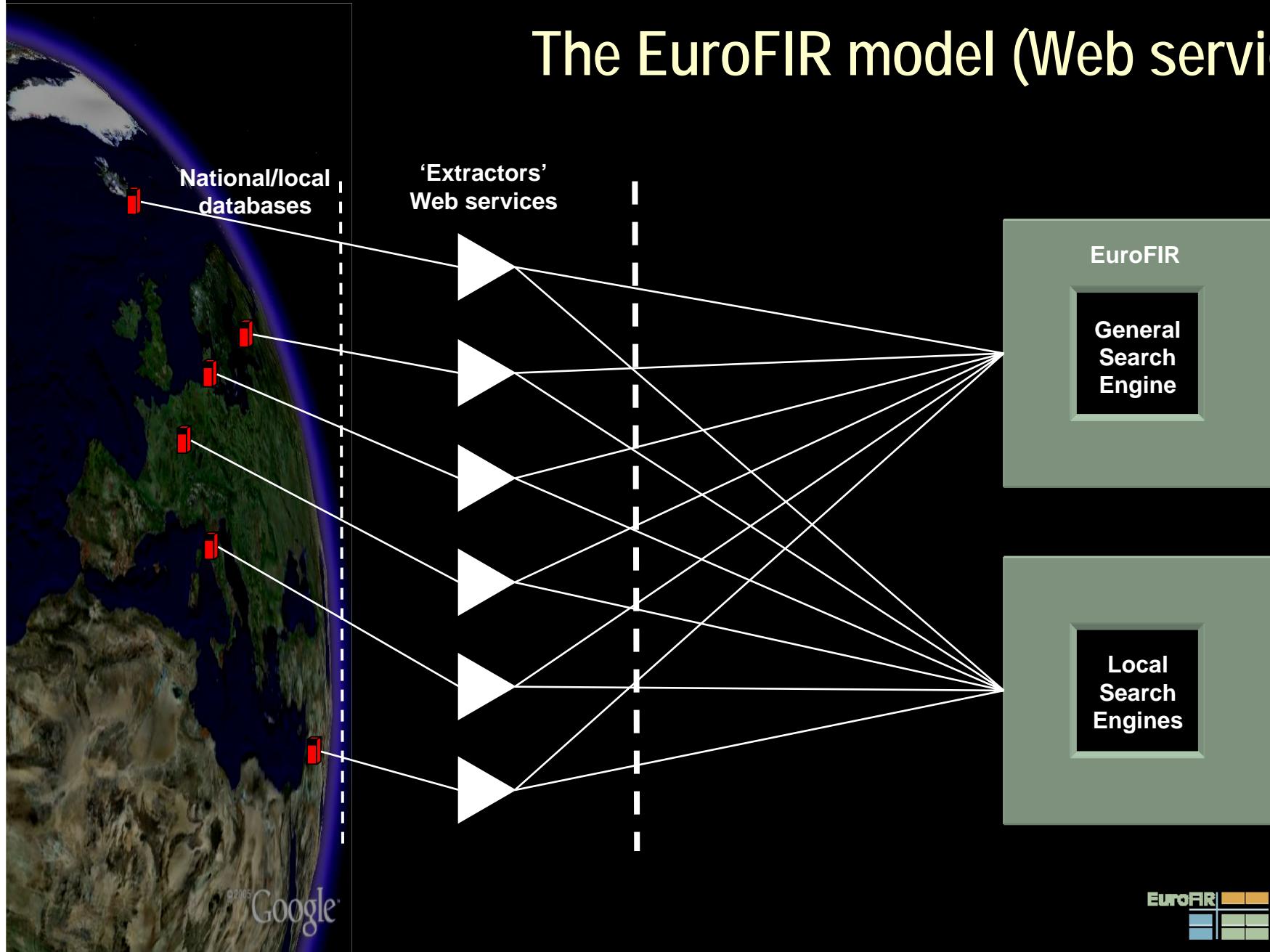


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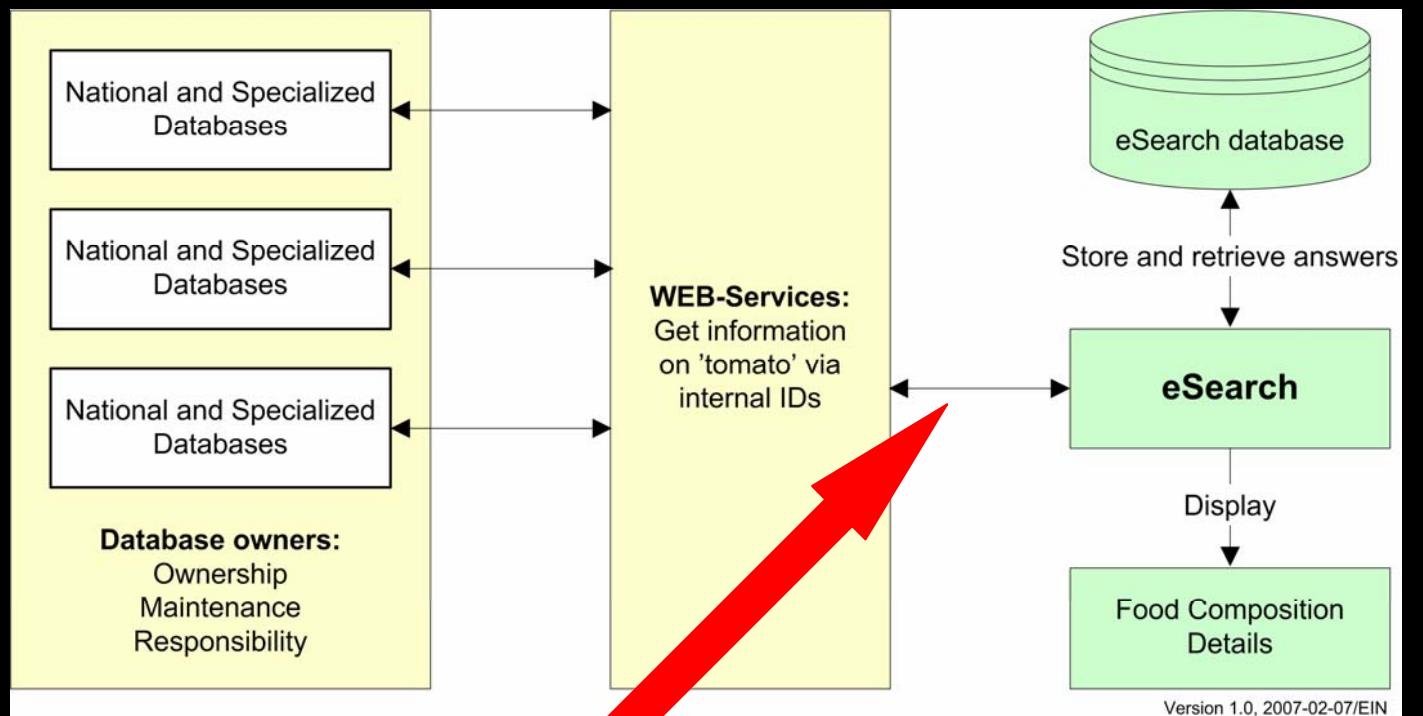


The EuroFIR model (Web services)





EuroFIR eSearch facility



Web Services deliver data in XML format



EuroFIR - Search Function Prototype - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Print Word Excel PowerPoint Outlook Internet

Address http://www.polytec.dk/eSearch/Default.asp?hSort=3 Go Links

eSearch Prototype

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▶ Search ▶ Foods Anders Møller ▶ Logout

Foods

Please select below the items for which you would like to extract details from the associated databases and then click the Show Details link to perform the search.

▶ Select all foods ▶ Clear selections ▶ Show Details

	ID	Dataset	English name	Original name
<input type="checkbox"/>	25019	AFSSA NDS 2005	Ravioli with meat and tomato sauce, canned	Ravioli viande, sauce tomate
<input checked="" type="checkbox"/>	11008	AFSSA NDS 2005	Tomato ketchup	Ketchup
<input type="checkbox"/>	11114	AFSSA NDS 2005	Tomato sauce with meat	Sauce tomate, à la viande
<input type="checkbox"/>	11107	AFSSA NDS 2005	Tomato sauce without meat	Sauce tomate, sans viande
<input type="checkbox"/>	25914	AFSSA NDS 2005	Tomato soup, cream of	Potage velouté de tomates
<input type="checkbox"/>	20048	AFSSA NDS 2005	Tomato, peeled, canned	Tomate, pelée, en conserve
<input checked="" type="checkbox"/>	0309	DFI NDS 2005	Tomato ketchup, bottled	Tomatketchup
<input type="checkbox"/>	0311	DFI NDS 2005	Tomato paste, concentrated	Tomatpure, koncentreret
<input type="checkbox"/>	0307	DFI NDS 2005	Tomato, peeled, canned	Tomat, flået, konserves
<input type="checkbox"/>	0308	DFI NDS 2005	Tomatojuice, canned	Tomatjuice, konserves
<input type="checkbox"/>	1_030	NFA NDS 2004	Chili sauce tomato	Chilisås tomat
<input checked="" type="checkbox"/>	1_048	NFA NDS 2004	Ketchup tomato	Ketchup tomat
<input type="checkbox"/>	1_132	NFA NDS 2004	Tomato juice canned ready-to-drink	Tomatjuice konserv drickf
<input type="checkbox"/>	1_138	NFA NDS 2004	Tomato purée canned	Tomatpuré konserv konc
<input type="checkbox"/>	1_230	NFA NDS 2004	Tomatoes green pickled	Tomater gröna syltade
<input type="checkbox"/>	1_131	NFA NDS 2004	Tomatoes whole canned whole contents	Tomater hela konserv m lag

▶ Select all foods ▶ Clear selections ▶ Show Details

Internet

EuroFIR - Search Function Prototype - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Favorites

Address http://www.polytec.dk/eSearch/Default.asp?comp=FAT#Details

eSearch Prototype

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▶ Search ▶ Foods ▶ Details Anders Møller ▶ Logout

Details

The following information was found.

Proximates	Carbohydrates	Fat	Protein	Vitamins	Minerals	Properties							
Id	Dataset	English name		ENERC	PROT	NT	FAT	CHOT	CHO	ALC	DRYMAT	ASH	WATER
1_048	NFA NDS 2004	Ketchup tomato			1.5 g		0.5 g		23.8 g	0 g		3.1 g	70.0 g
11008	AFSSA NDS 2005	Tomato ketchup		478.9 kJ	2 g	0.32 g	0.4 g	26.2 g	25.3 g	0 g	33.2 g	4.01 g	66.8 g
0309	DFI NDS 2005	Tomato ketchup, bottled			3.0 g	0.48 g	2.4 g	21.7 g	18.4 g	0 g	28.5 g	1.4 g	71.5 g

All contents are per 100g edible portion unless otherwise stated

Fat, total

Component: FAT

Component group: Proximates

▶ Close ▶ Top

Dataset	English name	Unit	BestLoc	Min	Max	Std	No	Qual	MTyp	MID	PTyp	ATyp	Reference
NFA NDS 2004	Ketchup tomato	g	0.5						X		PA	L	Anon.: Svenska Produktfakta < 1986 (Önos, Winner, Ekström, Kf, Blå Bland, Findus, Felix m.m). < 1986.
AFSSA NDS 2005	Tomato ketchup	g	0.4	0.36	0.4		31	B	D	X	B	F	Feinberg, M.; Favier, J.C.; Ireland-Ripert, J.: Répertoire Général des Aliments: Table de composition. Lavoisier Tec & Doc, Paris. 1991.
DFI NDS 2005	Tomato ketchup, bottled	g	2.4				1		A	ME81	R	O	Sørensen, A.: (Kostfiberrapport). Not published. 1988.

All contents are per 100g edible portion unless otherwise stated

http://www.eurofir.net/ Internet



Thank you for your patience

EuroFIR

<http://www.eurofir.net/>

LanguaL

<http://www.langular.org/>

