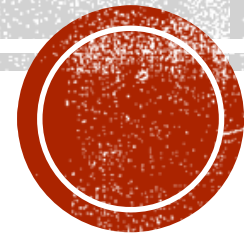


# Valorization of olive waste in sustainable food innovation



*october 2015-october 2018*



## University of Zagreb

### Faculty of Pharmacy and Biochemistry

Faculty of Food Technology and Biotechnology

Department of Food Chemistry

Department of Pharmaceutical Technology

Department of Pharmacognosy

Department of Medicinal Chemistry

Department of Food Engineering

Prof. Dubravka Vitali Čepo

Kristina Radić,  
mag.pharm  
Sanja Jurmanović,  
mag.chem

Prof. Mario Jug

Prof.  
Marijana Zovko  
Končić

Prof.  
Marija Grdić  
Rajković

Prof. Suzana Rimac Brnčić

Department of Analytical Chemistry, FBF



Institute for Medicinal Research



Center for Food Technology and Biotechnology, Zadar





*NutriOliWa*



**OLIVE POMACE**





**OLIVE POMACE**

**OLIVE POMACE**

20%oil (olive pomace oil)

source of energy (biofuel)

source of olive phenols  
(oleuropein derivatives,  
hydroxytyrosol)



## EU Register on nutrition and health claims

The search tool only allows searches for health claims\*, and not nutrition claims.










\* **Health claims for which protection of proprietary data is granted** (and for which the right of use of the claim is restricted to the benefit of the applicant) are **only** listed here.

You can also download the complete dataset of nutrition and health claims in the following formats:  (1.14 Mb)  (2.22 Mb)

EU Register Search

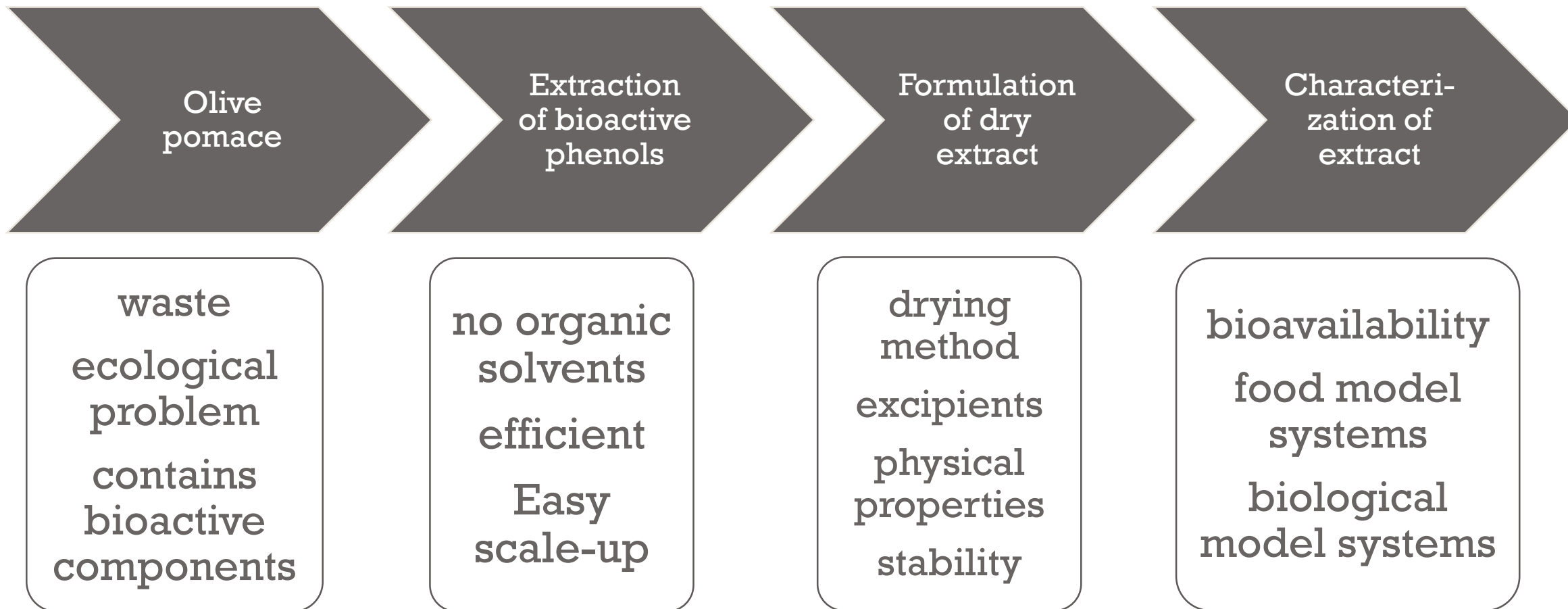
Showing 1 to 1 of 1 entries (filtered from 2,310 total entries) 10 records per page

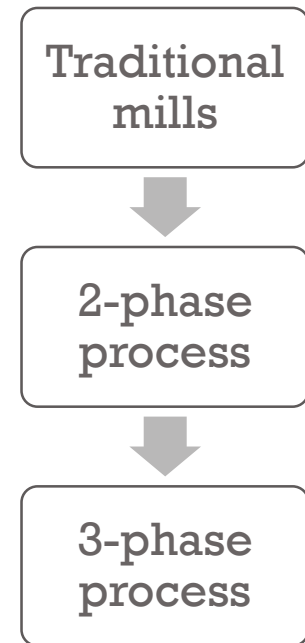
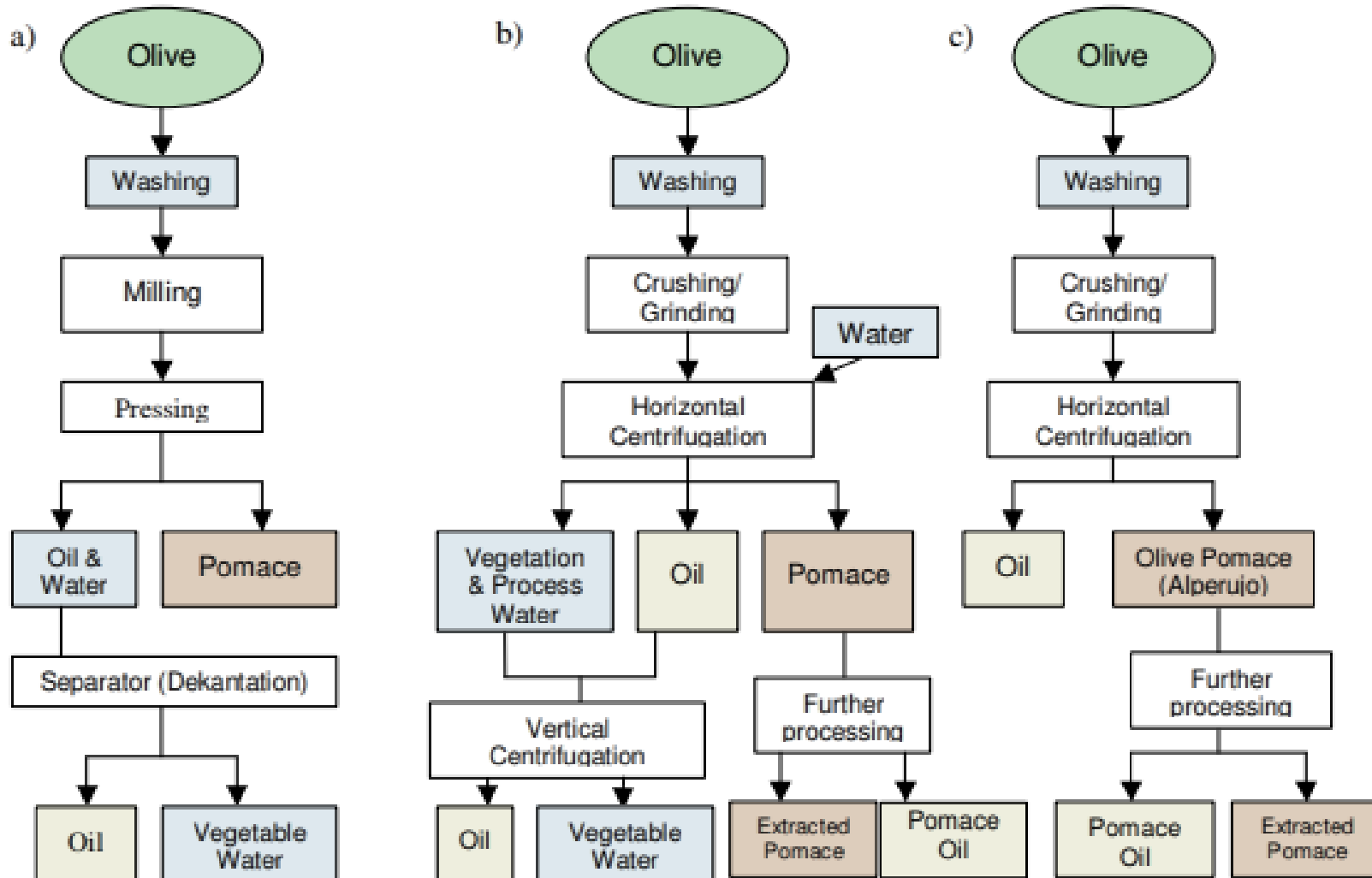
< 1 >

Claim type 	Nutrient, substance, food or food category 	Claim 	Conditions of use of the claim / Restrictions of use / Reasons for non-authorisation 	Health relationship 	EFSA opinion reference / Journal reference 	Commission Regulation 	Status 	Entry ID 
Art.13(1)	Olive oil polyphenols	Olive oil polyphenols contribute to the protection of blood lipids from oxidative stress	The claim may be used only for olive oil which contains at least 5 mg of hydroxytyrosol and its derivatives (e.g. oleuropein complex and tyrosol) per 20 g of olive oil. In order to bear the claim information shall be given to the consumer that the beneficial effect is obtained with a daily intake of 20 g of olive oil.	protection of LDL particles from oxidative damage	2011;9(4):2033	Commission Regulation (EU) 432/2012 of 16/05/2012	Authorised	1333, 1638, 1639, 1696, 2865

Showing 1 to 1 of 1 entries (filtered from 2,310 total entries)

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Country	Data	Production methods used			
		Traditional	2 phase centrifugal system	3 phase centrifugal system	Other
Spain	National		100%		
	-Jaen-		100%		
Italy	National	37.5%	0.7%	47.5%	Mixed (2.5) - 9,6 %. Other- 4,2 %
	-Liguria-	52%	0,005%	30%	Mixed (2.5) - 13 %. Other- 0,02%
Greece	National	5%	7%	88%	
	-Crete-	1%	5%	94%	
Croatia	National	43%			57% (2-phase and 3-phase)
	-Istria -	6%	63%	31%	
Slovenia	National	33,3%	33,3%		33,3%
	-Istrian -	36%	27%		36%

Country	Data	Quantity of (tn/year)			
		produced olive oil	virgin pomace	dry pomace (with pits)	pit/stone
Spain	National	1.230.000	4.920.000	4.222.000	2.500.000
	-Jaen-	544.555	2.058.221	1.770.378	1.050.000
Italy	National	721.418	n.a	n.a	n.a
	-Liguria-	5.500	12.000	Not existing	3.240 potentially (27% of virgin pomace)
Greece	National	352.000		598.000	53.800-161.500
	-Crete-	33.300	n.a	56.500	5.100-15.400
Croatia	National	5.000	18.200	n.a	3.640
	-Istria -	810	3.509	n.a	710
Slovenia	National	275	1100	n.a	281
	-Istrian -	255	1000	n.a	258





Croatia



Olive mill waste is treated as waste and majority is disposed to the environment



Olive waste is also exported to be used as bio-fuel



# *NutriOliWa: extraction optimization*

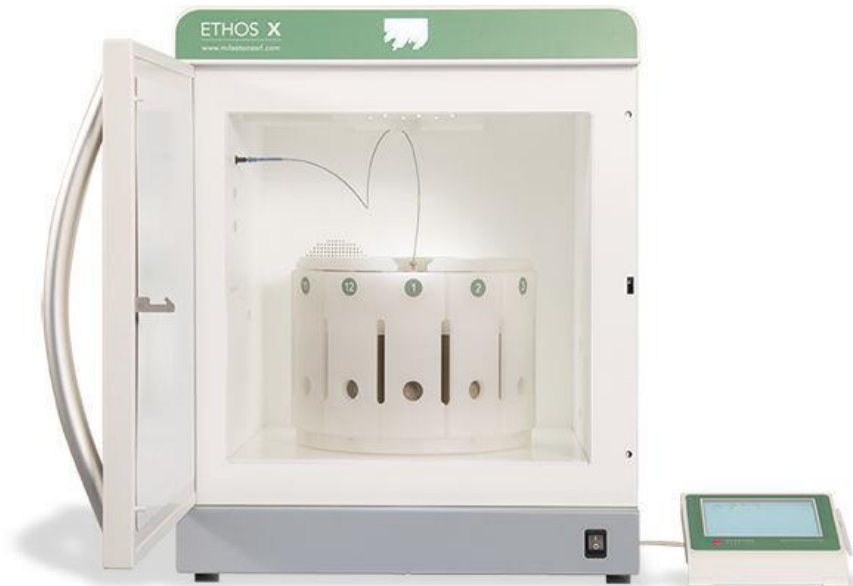
Extraction optimization



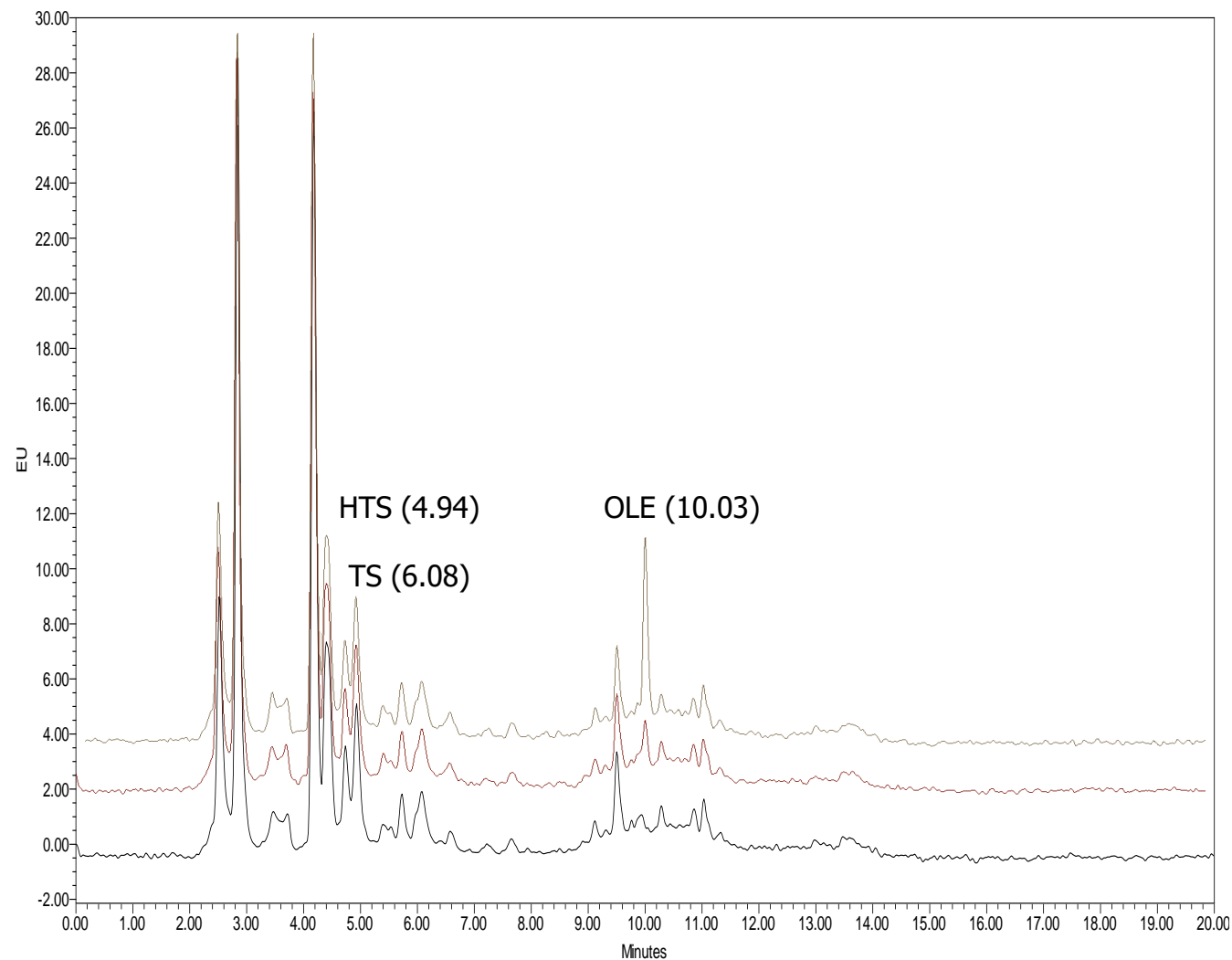
Sustainable process



No toxic solvents  
Decreased energy consumption  
High yields  
Easy scale-up



# *NutriOliWa: extraction optimization*



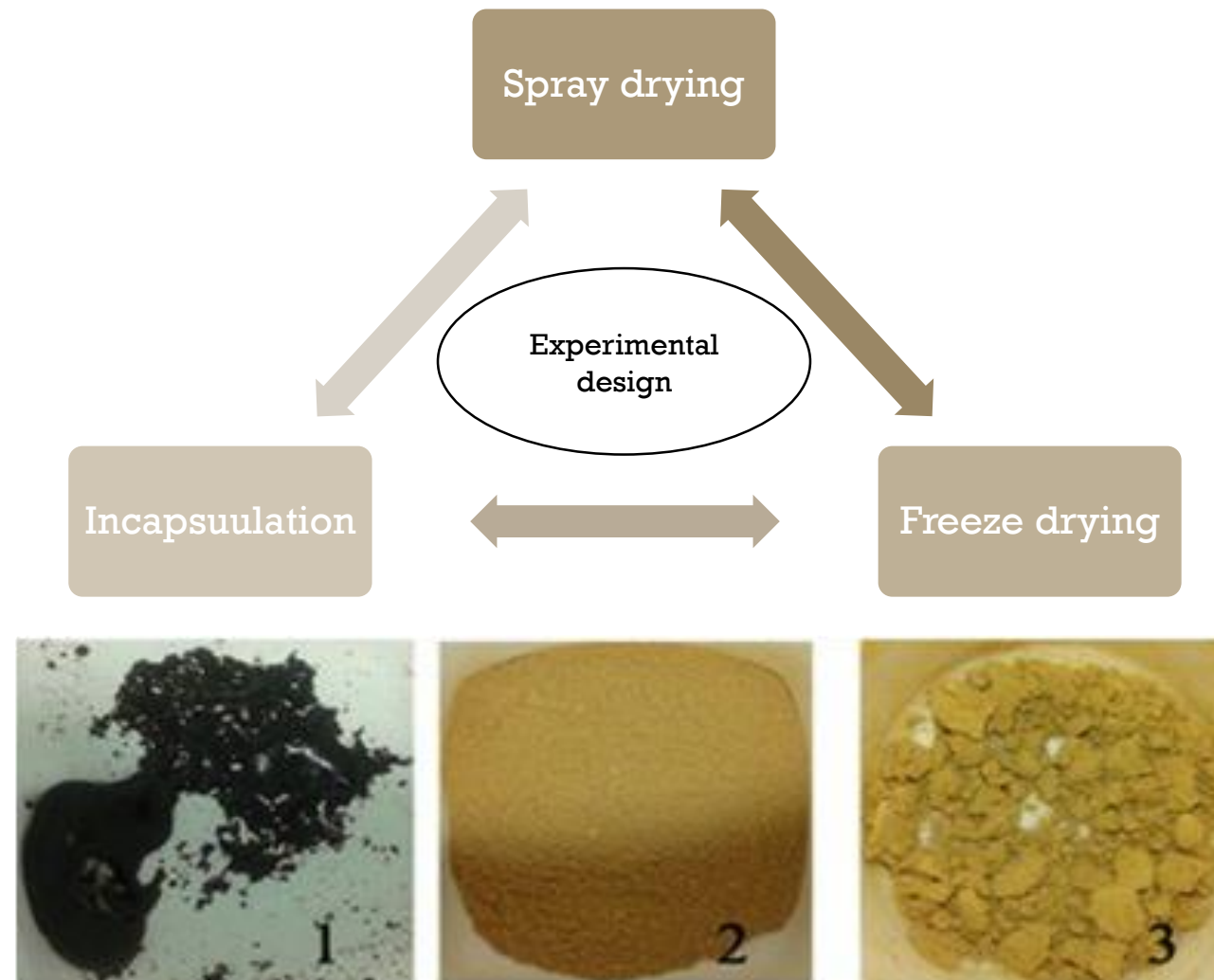
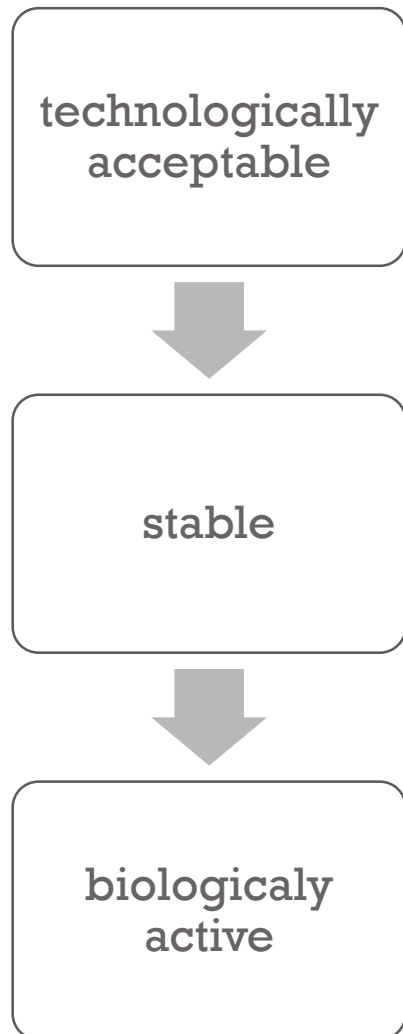
60% ethanol  
as extraction  
solvent

Optimized  
UAE

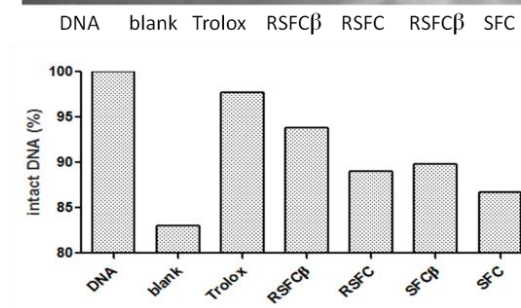
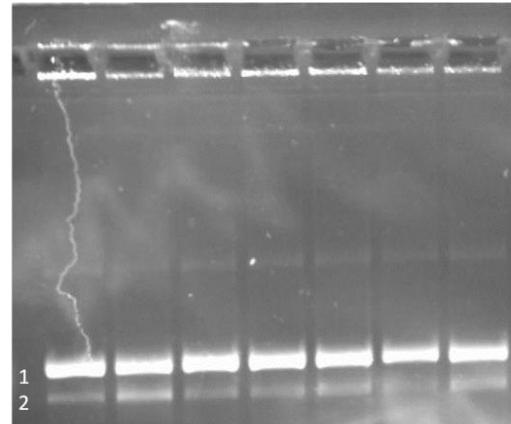
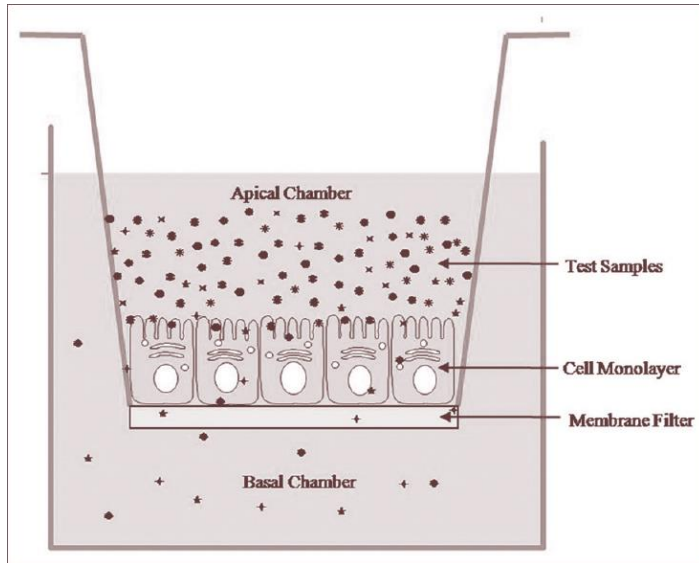
Optimized  
MAE



# *NutriOliWa: formulation*



# *NutriOliWa: characterization*



In vitro  
bioavailability



In vitro antioxidant  
activity



Antidiabetic  
activity



# *NutriOliWa: novel applications*



## Dietary supplement

- Expected health effects of olive oil
- Antidiabetic effect
- Hepatoprotective effects

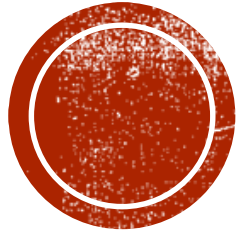
## Antioxidants in food and cosmetic industry

- Antioxidants in oil
- Antioxidants in meat model systems
- Antioxidants in emulsion models

## Se-nanoparticles

- Sustainable production
- Additional health benefits





Thank you for your attention

