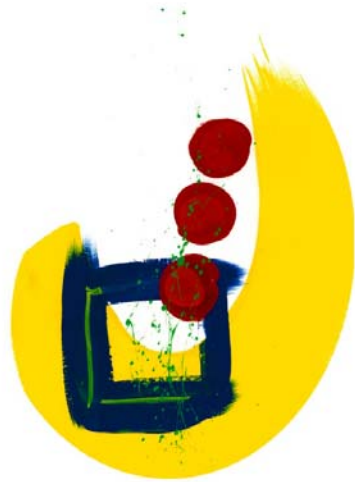




RESEARCH FOR MORE QUALITY OF LIFE



ttz Bremerhaven

RESEARCH AND
INNOVATION
FOCUSING ON BY-
PRODUCTS
OF GRAPES AND WINES
PROVINO AND MORE



ttz Bremerhaven

ABOUT US



- Research services provider founded 1987 in Bremerhaven (non-profit)
- Approx. 120 employees: international team of experts working in the areas of food, environment and health
- 4 Research sites and test facilities in Bremerhaven (Germany)
- Annual budget approx. 7 Mio. € (third party funding & direct contracts)

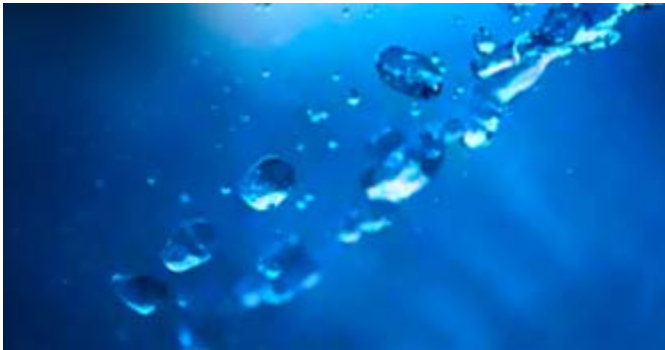


MAIN RESEARCH INTERESTS & EXPERTISE



Food

Analytics, **Sensory Science**, Microbiology, Taste Preferences, Product Development, Bakery and Cereal Technology, Food Technology



Environment

Renewable Energies, Water and waste-water Treatment, Aquaculture, **Bio mass**, Sustainable Landscape & Resource Management, Energy Efficiency



Health

Minimally Invasive Surgery , **Medical Information and Communication Technologies**, Pollutants Analysis, Functional Foods, Modern Health Support



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SERVICE OFFER



Innovation Management

Research and Development

Project Management

Funding Advice

Training

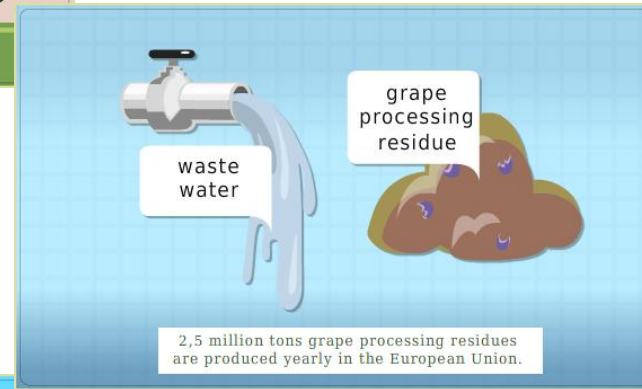
Studies and Analysis

Organization and Software



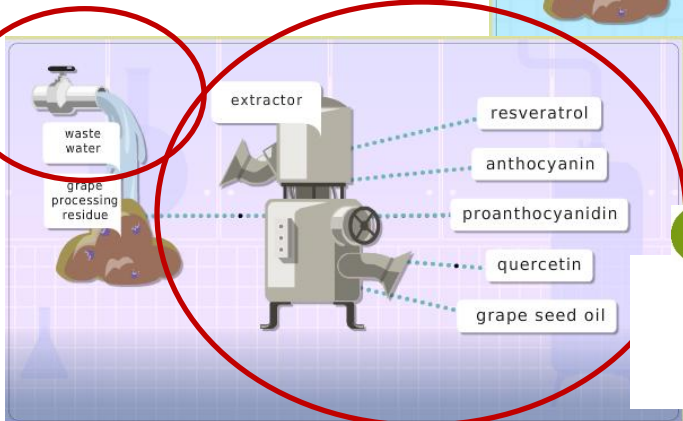
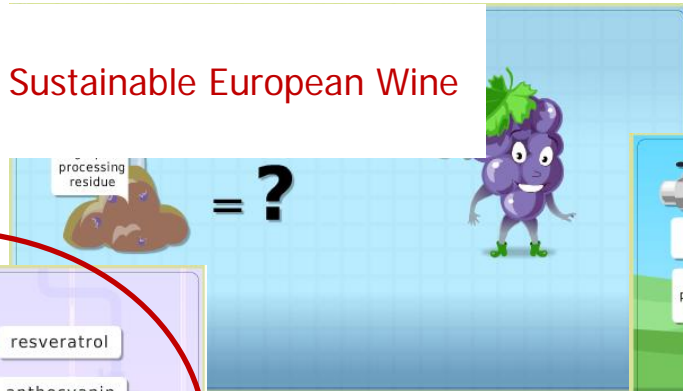
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BY-PRODUCTS OF PROCESSING GRAPES INTO WINE



SUSTAVINO

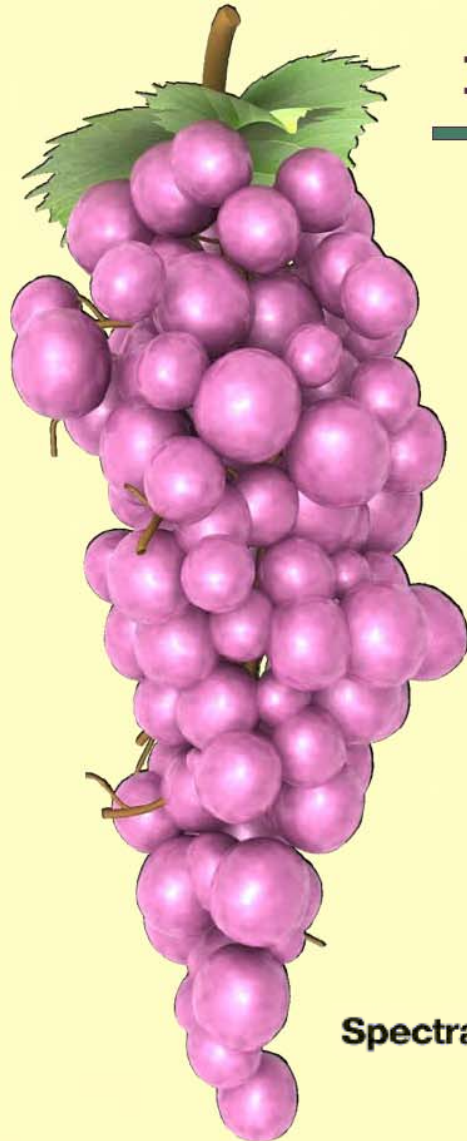
An Integrated Approach for Sustainable European Wine Production



Assessment and dissemination of strategies for the extraction of bioactive compounds from grape processing residues



arhaven.de



Intention of ProVino

- ↗ **Grape Wine Production is a Very Important Economic Factor in Europe.**
- ↗ **A Huge Amount of Raw Material is available for Production of High Valuable Products.**
- ↗ **Sustainability in Food Production Chains requires Utilisation of all By-products.**
- ↗ **World-wide growing Interest on Health Promoting Food Ingredients / Functional Foods / Dietary Supplements**

Spectral Service



Ideen eine Zukunft geben



EUREKA



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PROVINO: EXTRACTION OF NUTRITIONAL VALUABLE COMMODITIES FROM REMNANTS OF WINE RIPENING FOR APPLICATION IN FOOD PRODUCTS AND COSMETICS





PROVINO: EXTRACTION OF NUTRITIONAL VALUABLE COMMODITIES FROM REMNANTS OF WINE RIPENING FOR APPLICATION IN FOOD PRODUCTS AND COSMETICS

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↪ **Pleasant Appearance and Flavour of Red Wine depending on the Variety**

↪ **Rich in Antioxidant Polyphenols**

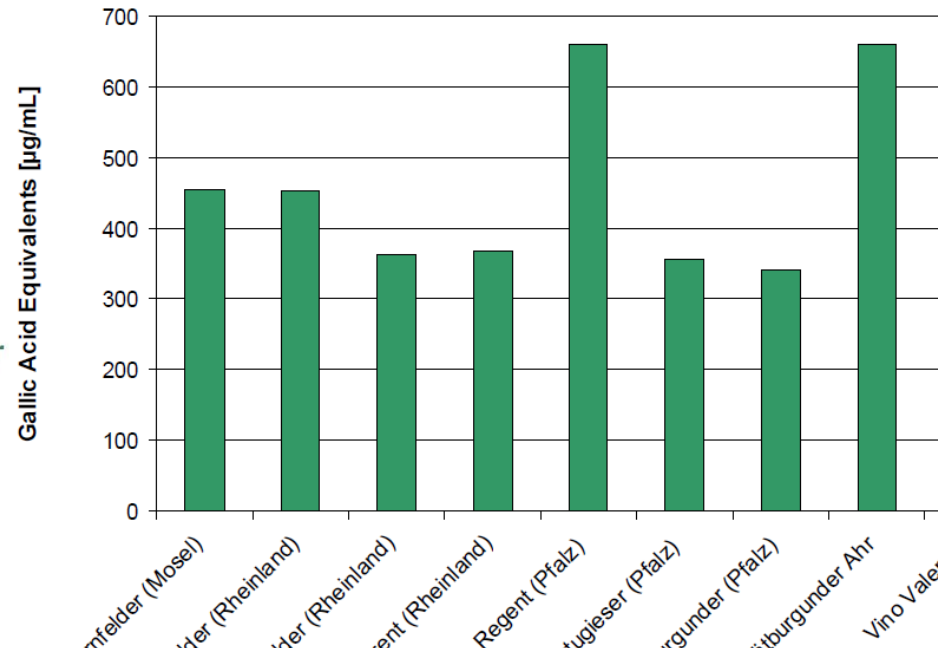
↪ **Up to 30 % Protein**

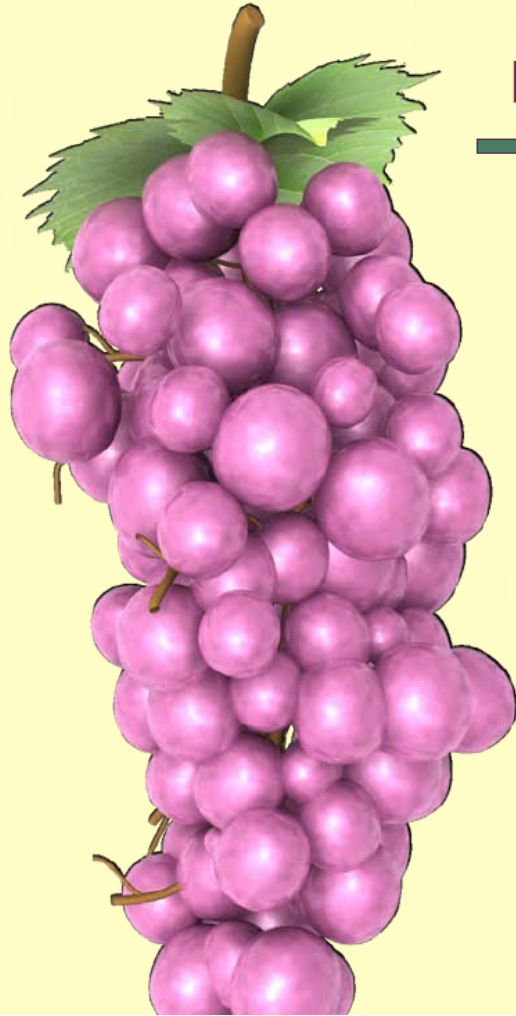
↪ **Essential Vitamins B₁, B₂, & B₃**

↪ **Essential Minerals – up to 7 % Potassium along with a low content of Sodium**

↪ **Low Fat and Sugar Content**

↪ **Alcohol-Free**





Philosophy of ProVino

- ~ **ProVino is not just a concentrate of polyphenols!
E.g. Resveratrol is only a Chemical Substance.**
- ~ **ProVino is not just a mixture of several healthy ingredients !**
- ~ **If you need w-3 fatty acids, eat fish !**
- ~ **If you need β -Carotene, eat carrots !**
- ~ **ProVino is a non-designed Functional Food.
All Functional Ingredients are in their Natural Grown Matrix!**

ProVino in Pastries

- ~ Concentrations added: 0.5, 1, 2, 4, and 6 %
- ~ Best Result: 2 % ProVino added
- ~ Nice Wine Flavour with Pleasant Acid



ProVino in baked Cake

↗ Concentrations added: 0.5 to 7 %

↗ Best Result: 3 % ProVino added



ProVino in Milk Chocolate

- ↗ Concentrations added: 1 to 6 %
- ↗ Best Result: 3 to 5 % ProVino
- ↗ Pleasant wine flavour with beady effect of acid



ProVino in Cosmetics – Skin Crème

ene3

- ↗ Concentrations added: 0.1 and 0.5 %
- ↗ Best Result: 0.5 % ProVino added
- ↗ Very intense colouring





ProVino in Cosmetics – eye shadow

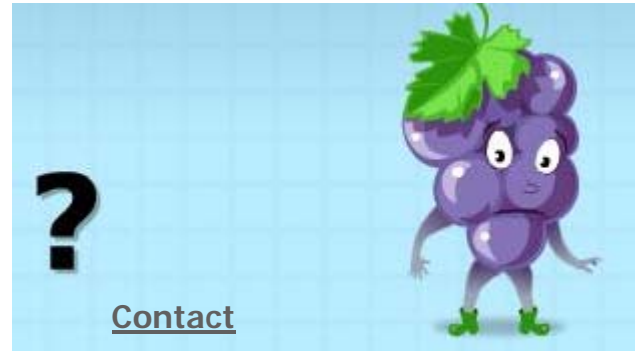
- ~ Concentrations added: 18 %
- ~ Nice Colouring possible on Lids



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THANK YOU FOR YOUR ATTENTION
DO YOU HAVE ANY QUESTION?



Contact

Marie Shrestha

ttz Bremerhaven
Team Leader International Projects
Am Lunedeich 12
D-27572 Bremerhaven
fon: +49 (0)471 80934 206
fax: +49 (0)471 80934 299

mshrestha@ttz-bremerhaven.de
www.ttz-bremerhaven.de