UNIVERSITÀ DEGLI STUDI DI MILANO

CONCORSO PUBBLICO, PER ESAMI, PER IL RECLUTAMENTO DI N. 1 UNITÀ DI PERSONALE AFFERENTE ALL'AREA DEI FUNZIONARI - SETTORE SCIENTIFICO-TECNOLOGICO, CON RAPPORTO DI LAVORO SUBORDINATO A TEMPO DETERMINATO PRESSO L'UNIVERSITÀ DEGLI STUDI DI MILANO - DIPARTIMENTO DI SCIENZE AGRARIE E AMBIENTALI - PRODUZIONE, TERRITORIO, AGROENERGIA - CODICE 22523

La Commissione giudicatrice della selezione, nominata con Determina Direttoriale n. 3501 del 04/03/2025, composta da:

Prof. Stefano Farris	Presidente
Prof. Marcello Iriti	Componente
Dott.ssa Manuela Caprioli	Componente
Dott.ssa Matilde Fusato	Segretaria

comunica i quesiti relativi alla prova orale:

GRUPPO DI QUESITI N. 1.

La/il candidato illustri impiego degli scarti vegetali per il settore agrario.

La/il candidato dia lettura e traduca il seguente brano:
Bioactive compounds extracted from plants, animals, and marine origin are important for the development of food, nutraceutical, and pharmaceutical products. Conventional extraction techniques were employed for many centuries for the extraction of bioactive compounds from medicinal plants. In the past decades, there is a tremendous improvement in extraction technology including the development of solvent (organic) less extraction techniques, reduce impurities, and low-energy extraction to preserve heat-sensitive bioactive compounds.

Fonte: Industrial Application of Functional Foods, Ingredients and Nutraceuticals
Extraction, Processing and Formulation of Bioactive Compounds
2023, Pages 45-87
https://doi.org/10.1016/B978-0-12-824312-1.00002-9

GRUPPO QUESITI N. 2.

La/il candidato illustri le classi di molecole con bioattività impiegabile nel settore agrario.

La/il candidato dia lettura e traduca il seguente brano:
The first step in the isolation and purification of bioactive compounds from plant material is extraction. Extraction of secondary metabolites such as phenolic acids and flavonoids is difficult due to their insoluble nature. Conventional extraction methods, such as Soxhlet, are successful procedures in the extraction of bioactive compounds and the equipment involved in these methods are distinct from each other. An appropriate extraction technique that balances product quality, process efficiency, production costs, and environmentally acceptable methods should be used for the extraction of bioactive compounds from plant tissues.

Fonte: Industrial Application of Functional Foods, Ingredients and Nutraceuticals
Extraction, Processing and Formulation of Bioactive Compounds
2023, Pages 45-87
https://doi.org/10.1016/B978-0-12-824312-1.00002-9

GRUPPO QUESITI N. 3.

La/il candidato illustri le tipologie di estrazioni ed impiego di solventi per un successivo impiego in ambito agrario.

La/il candidato dia lettura e traduca il seguente brano:
The application of innovative extraction methods in the food industries has been extensively investigated, due to increased consumer expectations for greener options that do not include hazardous chemicals, as well as industry concerns about sustainable, nontoxic extraction techniques. Innovative technologies, such as high hydrostatic pressure (HHP), ultrasound (US), pulsed electric field (PEF), supercritical fluid (SF), and others, are increasingly replacing the conventional methods. The use of novel and combined novel technologies increases extractability, resulting in yields with higher extraction rates.

Fonte: Industrial Application of Functional Foods, Ingredients and Nutraceuticals
Extraction, Processing and Formulation of Bioactive Compounds
2023, Pages 45-87
https://doi.org/10.1016/B978-0-12-824312-1.00002-9

Milano, 3 aprile 2025

La Commissione

Prof. Stefano Farris Presidente

Prof. Marcello Iriti Componente

Dott.ssa Manuela Caprioli Componente

Dott.ssa Matilde Fusato Segretaria