

1. Record Nr.	UNINA990002540010403321
Autore	Kyburg, Henry E. <jr.>
Titolo	Probability and the logic of rational belief / by Henry E. Kyburg, Jr.
Pubbl/distr/stampa	Middletown (Conn.) : Wesleyan University Press, 1961
Descrizione fisica	VIII, 346 p. ; 24 cm
Disciplina	519
Locazione	MAS SE S P11
Collocazione	MI-A-221 MI-A-81 11310 KYB 18-030
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr.	UNINA9910502991803321
Autore	Sharma Deepansh
Titolo	Biosurfactants : greener surface active agents for sustainable future / / Deepansh Sharma
Pubbl/distr/stampa	Singapore : , : Springer, , [2021] ©2021
ISBN	981-16-2705-3
Descrizione fisica	1 online resource (200 pages)
Disciplina	668.1
Soggetti	Biosurfactants Agents tensioactius Desenvolupament sostenible Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Intro -- Preface -- Contents -- About the Author -- 1: Biosurfactants or Chemical Surfactants? -- 1.1 Introduction -- 1.1.1 Classification of BSs Agents -- 1.2 Low-Molecular Weight (LMW) Biosurfactants -- 1.2.1 Glycolipids -- 1.2.2 Rhamnolipids -- 1.2.3 Sophorolipids -- 1.2.4 Trehalose Lipids -- 1.2.5 Mannosylerythritol Lipids -- 1.2.6 Lipopeptides -- 1.2.6.1 Surfactin -- 1.2.6.2 Fengycin -- 1.2.6.3 Iturin -- 1.3 High-Molecular Weight BSs -- 1.4 Microbial Polysaccharide BSs -- 1.4.1 Microbial Protein Surfactants -- 1.5 Properties -- 1.5.1 Temperature, pH, Salinity, and Ionic Strength -- 1.5.2 Toxicity and Biodegradability -- 1.5.3 Efficiency in Comparison with Chemical Surfactants -- 1.6 Surface and Interface Activity -- 1.6.1 Emulsification and De-emulsification -- 1.6.2 Foaming, Moisturizing, Dispersing, and Detergency Properties -- 1.7 Surfactant Vs. Biosurfactants -- 1.7.1 Competence of Biosurfactants in Comparison with Chemical Surfactants -- 1.8 Aptness of Biosurfactants for Industrial and Environmental Applications -- 1.9 Concluding Remark -- References -- 2: Screening of Biosurfactants -- 2.1 Properties of Biosurfactants or Basis of Screening -- 2.2 Introduction to the Screening Concept -- 2.3 Isolation of Biosurfactants Producing Microorganisms -- 2.4 Screening of

Biosurfactants -- 2.5 Qualitative/Indirect Methods -- 2.5.1 Agar Surface Overlaid with Hydrocarbons -- 2.5.2 Blue Agar Plate for Extracellular Glycolipids -- 2.5.3 Hemolytic Activity -- 2.5.4 Drop Collapse Method -- 2.5.5 Oil Spreading Assay -- 2.5.6 Emulsification Index (EI) -- 2.5.7 Solubilization of Crystalline Anthracene -- 2.5.8 Turbidity Assay -- 2.5.9 Microplate Assay -- 2.5.10 Cell Surface Hydrophobicity (CSH) -- 2.5.11 Measurement of CSH -- 2.5.12 Hydrophobic Interaction Chromatography (HIC) -- 2.5.13 Salt Aggregation Test (SAT).
 2.5.14 Bacterial Adherence to Hydrocarbons (BATH) -- 2.6 Measurement of Surface Tension -- 2.6.1 Tensiometric Measurement of SFT -- 2.6.2 Du-Nouy Ring Approach -- 2.6.3 Wilhelmy Plate Method -- 2.6.4 Stalagmometric Method -- 2.6.5 Pendant Drop -- 2.6.6 Axisymmetric Drop Shape Analysis (ADSA) -- 2.7 Molecular Tools to Identify Biosurfactant Producing Genes -- 2.8 High-Throughput Screening (HTS) -- 2.8.1 Atomized Oil Method -- 2.8.2 Detection of Lipopeptides Using Bromothymol Blue -- 2.8.3 Polydiacetylene (PDA)-Based Screening for Surfactin -- 2.8.4 A Rational HTS for the Screening of Sophorolipids -- 2.8.5 Determination of Carbon Source Concentrations by Cu(OH)₂ Method -- 2.8.6 Target-Site Directed Rational HTS for High Sophorolipids -- 2.8.7 Metagenomic Approach -- 2.8.8 Functional Metagenomics -- 2.8.9 Metagenome-Derived Ornithine Lipids Screening -- 2.9 Conclusion and Perspectives --
 References -- 3: Commercial Production, Optimization, and Purification -- 3.1 Introduction to the Commercial Production of BSs -- 3.2 Need and Availability of Inexpensive Substrates -- 3.3 Possible Substrates for BSs Production: Status Quo -- 3.3.1 Advantages and Drawbacks of Low-Cost Residues for BS Production -- 3.3.1.1 Industrial Waste Valorization -- 3.3.1.2 Industrial Waste Rich in Sugar Composition -- 3.3.1.3 Industrial Waste Rich in Oil, Fatty Acids, and Fats -- 3.3.2 Advantages and Limitations of Using Agricultural Residues and Waste Effluents -- 3.4 Bioprocess for the Commercial Production of BSs -- 3.5 Improvement/Optimization of Bioprocess -- 3.5.1 Development of Overproducing Mutants and Strains -- 3.5.2 Downstream Processing of BSs -- 3.6 Production and Downstream Process -- 3.7 Integrated Separation System of BSs -- 3.7.1 Foam Fractionation -- 3.7.2 Membrane Separation -- 3.7.3 Metabolic Engineering of Strain for Higher Production.
 3.7.4 Commercialized Biosurfactants -- 3.7.5 Biosurfactant Production Economics -- 3.7.6 Research Requirements and Future Directions --
 References -- 4: Industrial Applications of Biosurfactants -- 4.1 Introduction -- 4.2 Biosurfactants Role in Food -- 4.2.1 Properties of Biosurfactants Ideal for the Food Applications -- 4.2.2 Surface Pre-conditioning by Microbial Surfactants -- 4.2.3 Biosurfactants as Food Additives -- 4.2.4 Biosurfactants as Food Emulsifying Agents -- 4.2.5 Biosurfactants Role in Food Preservation -- 4.2.6 Microbial Surfactants in Food Sanitation -- 4.3 Sensorial Behavior -- 4.4 Food Matrix Interactions -- 4.5 Regulations to Commissioned Biosurfactants as a Food Additive -- 4.6 Role of Emulsions in Pharmacy and Cosmetic Industry -- 4.6.1 Pharmaceuticals -- 4.6.2 Cosmetics Formulations -- 4.6.3 BS as Prebiotics -- 4.6.4 Healthcare Applications -- 4.6.5 Oral Health -- 4.6.6 Skincare Formulations -- 4.6.7 Drawbacks and Future Trends -- References -- 5: Role of Biosurfactants in Agriculture and Soil Reclamation -- 5.1 Introduction -- 5.2 Biosurfactants in Agriculture and Environment -- 5.2.1 Antimicrobial and Antifungal Properties -- 5.2.2 Biosurfactants as Biopesticide -- 5.3 Biosurfactants in Control of Post-Harvest Disease Control -- 5.4 Soil Health and Micronutrients Availability -- 5.5 Environmental Applications -- 5.5.1

Degradation of Polycyclic Aromatic Hydrocarbon (PAH) -- 5.5.2 Heavy Metal Removal and Soil Washing -- 5.5.3 Microbial Enhanced Oil Recovery -- 5.5.4 Role in Waste Treatment -- 5.6 Future Directions and Conclusions -- References -- 6: Toxicity and Biodegradability Assessment -- 6.1 Introduction -- 6.2 Biodegradability of Surfactants -- 6.2.1 Comparative Life Cycle Assessment (LCA) of Surfactants -- 6.2.2 Toxicity and Degradative Comparison of Surfactants and Biosurfactants -- 6.2.3 Toxicity Experimental Models. 6.2.4 Skin Irritation Test (SIT) -- 6.2.5 Acute Toxicity -- 6.3 Ecotoxicity Assessment -- 6.3.1 Artemia Assay -- 6.3.2 Anomalocardia Brasiliana -- 6.4 In Vitro Cytotoxic Effect -- 6.5 Phytotoxicity -- 6.6 Conclusion and Future Directions -- References.
