

Hydrocolloid Sponges (Yissum)

code: 6-2006-58

[Amos Nussinovitch](#), HUJI, Faculty of Agricultural, Food and Environmental Quality Sciences, Biochemistry, Food Science and Nutrition

Cellular solids for wide range of applications

Category	Food and Nutrition, Carriers/Encapsulation, Hydrocolloids, Agriculture, Environment, Water Technologies, Pest Control/Herbicides
Development Stage	Sponges routinely produced in laboratory
Patent Status	U.S. Patent 6,589,328; Israeli Patent 104441; US Patent App.US-2003-0224022-A1
Market Size	U.S. functional foods market: \$37.7 billion by 2007; world nutraceutical products \$173 billion; controlled release drug delivery products exceeded \$19 billion in 2004

Highlights

- A single hydrocolloid (water-soluble polymer) or a combination of hydrocolloids is used to produce hydrocolloid sponges (cellular solids)
- Versatile basis for range of manufacturers who can adapt properties to product requirements
- Sponges routinely produced in laboratory
- Wide range of applications: functional food, medicine, agriculture, environment, packaging

Our Innovation

An assortment of methods to produce hydrocolloid sponges that are dry, porous, tasteless, and colorless. Properties, including water absorption, biodegradability, pore size, and structure, as well as color, taste, and texture, can be tailored to requirements.

Key Features

- High liquid absorption and high compressibility
- Flexible loading capacity is basis for use as carriers for a wide range of compounds: vitamins, minerals, proteins, carbohydrates, medical, fertilizers, and micro-organisms for water treatment and biological control of plant diseases
- Base for edible products, containing sugar or sugar substitute, flavoring agents, or taste enhancers
- Hydrocolloid sponges recognized as safe, with FDA approval

Development Milestones

- Seeking licensing agreements and funding for continued research and industrialization

The Opportunity

- Low-calorie dietary food supplement; can be produced with nutritional compounds
- Potential for use as biological control of plant root diseases and reducing nitrate level in water, in controlled release of medicinal agents, and as biodegradable packaging material
- Future development for use as medicinal bandages, biodegradable diapers, and hygienic pads

Contact for more information:

Michal Levy , VP Head of Bus. Dev. Agri-Tech, Vet. & Environment, +972-2-6586635

Yissum Research Development Company of the Hebrew University of Jerusalem
Hi-Tech Park, Edmond J. Safra Campus, Givat-Ram, Jerusalem P.O. Box 39135, Jerusalem 91390
Israel Telephone: 972-2-658-6688, Fax: 972-2-658-6689