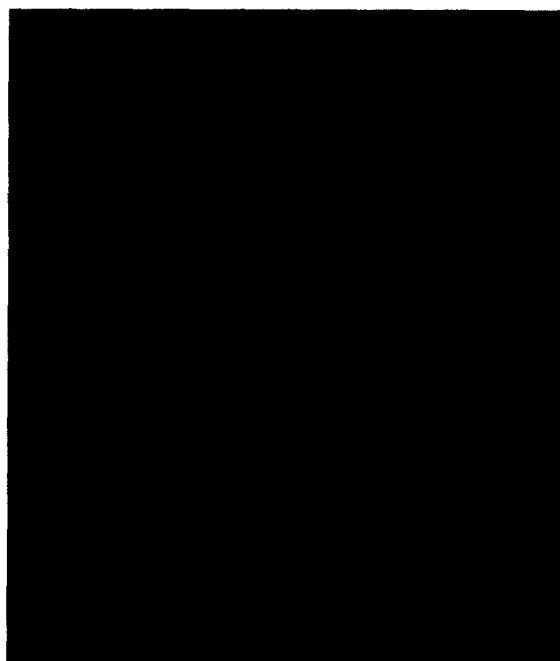


News and Views

Professor Tokuya Harara



Emeritus Professor Tokuya Harada passed away on 29 August 1996. He graduated from the University of Tokyo in 1941, and worked at Osaka University until 1982, and then continued to work at Kobe Women's University until 1994. He worked as an important member of various committees of the universities, and as a vice president of Japan Society for Bioscience, Biotechnology, and Agrochemistry, and as an organizing committee member of international conferences. He received awards from the Japan Society for Bioscience, Biotechnology, and Agrochemistry, and from the Japanese Government.

He discovered curdlan, an α, β -1,3-glucan which is produced by *Alcaligenes fae calis* var. *myxogenes* 10C3, in 1964. Since then, he studied the structure, physico-chemical properties, and especially the gelation mechanism of curdlan, as well as the application of this microbial polysaccharide in frozen food and other food use. He collaborated with Prof. Kasai, an expert on X-ray diffraction off polymers, to clarify the structure of curdlan, and carried out many electron microscopic observations. He edited an excellent handbook on polysaccharide with Prof. Misaki, and contributed many chapters in various monographs and proceedings of international conferences.

He enthusiastically was interested to exploit all the possibilities of curdlan since he felt as if curdlan was his own "child". He was called Mr Curdlan by his friends. He was very kind and friendly, and liked to speak with friends. He will continue to be remembered in many scientific articles and in the hearts of his friends.

Katsuyoshi Nishinari

The market research company IMR International has recently completed a multiclient market summary of food thickeners and stabilizers in the USA and Western Europe. The findings are summarized by IMR and are as follows:

Total hydrocolloid consumption in the countries surveyed is in the order of one million metric tonnes (2.2 billion lbs) with an estimated market value of \$1.6 billion. The continued trend towards lower fat foods has fueled the demand for these texturing agents. There has been much consolidation in the hydrocolloid industry. Several major

acquisitions and divestments have taken place in the last few years. Kelco was sold by Merck to Monsanto for \$1.1 billion. Sanofi sold its food ingredients division to SKW Trostberg for about \$700 million and more recently Unilever sold its food ingredients divisions, Quest and National Starch to ICI for the princely sum of \$8 billion.

New and/or differentiated hydrocolloids continue to be developed by the industry. Gellan gum and Curdlan are two fermentation based texturizing agents approved in the 1990s. Because of the regulatory time and cost constraints, differentiated hydrocolloids will provide most of the new functionality in future developments. Slendid™ a pectin based material developed by Hercules is a good example of such differentiated hydrocolloids. Properties such as rapid dispersion, improved compatibility with other ingredients and even clear solutions have been developed as improved versions of already approved hydrocolloids. Self affirmation of GRAS status is also becoming more common for texturizing agents such as Konjac and Tara gum.

The hydrocolloid industry has been very profitable in the past, but has found margins being squeezed in the 1990s by increases in raw materials and production costs combined with much stronger competitive forces. These are nevertheless speciality additives with many opportunities for value addition.

The countries covered in the survey by IMR International, include the USA, UK, France, Germany, Italy and other parts of Western Europe. Each country section indicates the total consumption, major suppliers and prices of all the hydrocolloids covered. Forecast growth rates for these hydrocolloids range from a low of 2–3% for some of the starches to a high of about 8–10% for some of the speciality and more versatile hydrocolloids. The specific hydrocolloids covered in the IMR survey are as follows:

<i>Agar</i>	<i>Gellan Gum</i>
<i>Alginates</i>	<i>Guar Gum</i>
<i>Arabic</i>	<i>Karaya</i>
<i>Carrageenan (Refined)</i>	<i>LBG</i>
<i>carrageenan (Semi Refined)</i>	<i>Pectin (HM & LM)</i>
<i>CMC</i>	<i>Starch (Native & Modified)</i>
<i>MC/HPMC</i>	<i>Tragacanth</i>
<i>MCC</i>	<i>Xanthan</i>

All food applications are covered in this survey, including pet food which is one of the largest and most concentrated markets for hydrocolloids. Ten specific food industry segments are analyzed including:

<i>Bakery</i>	<i>Prepared Meals</i>
<i>Beverages</i>	<i>Preserves & Prepared Fruit</i>
<i>Confectionery</i>	<i>Sauces & Dressings</i>
<i>Dairy</i>	<i>Soups</i>
<i>Pet Food</i>	<i>Other Applications</i>

The competitive nature of this industry has held down prices for some of the major hydrocolloids. Xanthan gum prices for example have been steadily dropping over the last 5–6 years from a peak of \$5.80/lb in the third quarter of 1991 to a low of \$4.00/lb in the third quarter of 1996. Other, naturally derived hydrocolloids such as guar, locust bean gum and gum arabic all suffer the vagaries of climatic conditions. The price of LBG skyrocketed from about \$3.25/lb in early 1994 to over \$18/lb in late 1994 early 1995.

For further information contact:

IMR International
Dennis Seisun
POB 28993
San Diego, CA 92198-0993, USA

Tel: 619-451 6080; Fax: 619-451 0428; email: dseisun@aol.com