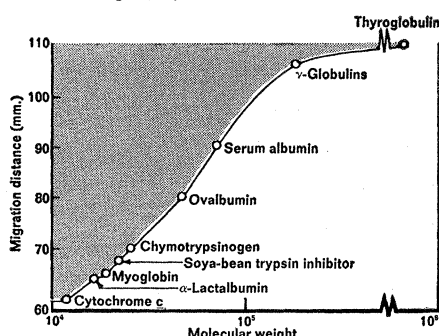


# Thin-layer gel filtration with **Sephadex<sup>®</sup> SUPERFINE**

The advantages of both Sephadex gel filtration and thin-layer chromatography can now be utilized with the Sephadex Superfine.

Sephadex Superfine is an important complement to other analytic methods, particularly where only sample quantities of experimental material are available. It is useful also (1) for determining the optimum conditions for column experiments (2) in place of normal Sephadex in gel filtration columns when very high resolution is required (3) as a supporting medium in column electrophoresis and in partition chromatography.



Correlation between the molecular weight of 9 proteins and their migration rate in thin-layer gel filtration on Sephadex Superfine G-100 was investigated. Measurements from separate experiments were correlated by expression on the common basis of 6 cm. migration by cytochrome c. (Andrews, P., *Biochem. J.* (1964) 91,222, by permission of the author.)

Sephadex Superfine gels can be applied to glass plates with ordinary TLC equipment. They adhere easily to the plates. Addition of a binder is not necessary.

Six types of Sephadex from G-25 to G-200 are available in the SUPERFINE grade. The small particle size of Sephadex Superfine (between 10 and 40 microns) permits preparation of thin layers, even with the more porous gels

The various Sephadex types have the following fractionation ranges.		
Type	Approximate fractionation range	
	Polysaccharides	Proteins
Sephadex G-25	100— 5,000	
Sephadex G-50	500— 10,000	
Sephadex G-75	1,000— 50,000	3,000— 70,000
Sephadex G-100	1,000—100,000	4,000—150,000
Sephadex G-150	1,000—150,000	5,000—400,000
Sephadex G-200	1,000—200,000	5,000—800,000

For additional technical information on Sephadex Superfine, including booklet *Thin-Layer Gel Filtration*, write to:



**PHARMACIA FINE CHEMICALS INC.**  
800 Centennial Avenue, Piscataway, N. J. 08854  
Pharmacia (Canada) Ltd., 110 Place Crémazie  
Suite 412, Montreal 11 P. Q.

(Inquiries outside U.S.A. and Canada should be directed to PHARMACIA FINE CHEMICALS, Uppsala, Sweden.)

event, the present government policy of doing everything possible to restrict free discussion of chemical and biological weapons should be modified so as to permit full public examination of the question, limited only by the dictates of necessary military security. Hopefully, the petition might assist in advancing this aim.

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## Incaparina Gains Acceptance

In Carter's article, "World food supply: problems and prospects" (News and Comment, 6 Jan., p. 56), he referred to Incaparina, the low-cost protein-rich food supplement developed by the Institute for Nutrition for Central America and Panama (INCAP) as one example of the use of oil seed protein in a product designed to meet the needs of the developing countries. However, I believe that some clarification with respect to the commercial application of Incaparina is in order. While it is true that Incaparina is in various stages of product development in several Latin American countries, it is currently in full-scale commercial distribution in only Colombia and Guatemala. We do not believe that the current commercial sales of the product in either of these countries should be classified as "not particularly encouraging."

Carter did note, of course, that the Guatemalan experience is a notable exception. The 1966 sales in the two countries exceeded 4.6 million pounds (2.1 million kilograms) for a 40 percent increase over the previous year. This performance has been achieved without either large-scale governmental purchases of the product or any other form of subsidy. In Guatemala Incaparina has been sufficiently well accepted by consumers to have been in a paying position for the producer for over 2½ years. Sales volumes in Colombia are now reaching the "break-even" point and full commercial success is anticipated there. It is too early to forecast the results of consumer acceptability and market tests now underway in El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Brazil, and Venezuela.

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## Microbial Ecology

I strongly disagree with Pramer's review (3 Feb., p. 551) of Brock's *Principles of Microbial Ecology*. When I read the book in manuscript, I was delighted to note that it was *not* a compendium, but rather "a book of principles," to use the author's own words. The finished volume reaffirms this opinion. Brock has managed to wield the scissors with discrimination, and the result is a very readable, thought-provoking book which does bring forth many of the problems and principles of microbial ecology.

Contrary to Pramer's comments, the author clearly defines his intended audience in the preface, and the very elementary chapter on the microbial environment is a good starting point for many potential readers who may have had their training in the usual soils curriculum. I do not find an inconsistency between the statements that "the interior of an experimental animal is usually sterile" and that "microorganisms are frequently present in huge quantities, especially on the skin and in the intestinal tract," for the interior of an animal is usually considered to exclude the skin and the gastrointestinal tract. In short, I believe that Brock is to be commended for writing an informative, often profound, first volume in a new field in such a manner that the charm of the author's expression has not been deadened by dreary details of superfluous, uncritically chosen examples from the literature.

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... I found, in contrast with Pramer, that Brock's book was thoughtfully assembled, provocative, and, in those areas which I was able to judge, reasonably accurate. ... The reviewer writes that "There is little new information that the book can impart to a college student who has completed courses in introductory chemistry and microbiology. ..." Whether or not this is so is moot. But what is important is not just "new information" but the incorporation of that information into the warp and woof of the total fabric of science. Not to realize this is to miss the whole point of the book.

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