

用。

3 结 语

模拟移动床技术是分离技术的一次革新,是一种真正的连续制备色谱技术,它的出现使色谱分离产生了新的飞越^[18]。由于其分离效率高、连续操作、填料和洗脱剂消耗少,以及可实现调节和控制自动化的诸多优点,在氨基酸工业中引起人们的广泛关注,在其中正扮演着越来越重要的角色。

并且随着 SMB 与其他单元操作的结合,如 SM-BR(模拟移动床反应器)、SF-SMB(超临界流模拟移动床)等,赋予了 SMB 更强大的威力,使其成为氨基酸分离领域中最有前景的一门技术。

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The Application of SMB Technology on Amino Acid Industry

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ABSTRACT Simulated Moving Bed (SMB) is an advanced separation technology. It has recently drawn attentions of being used as a method of continuous preparative separation process. This paper addresses the basic principle, model set-up and simulation and optimization of operate-condition in SMB unit. And its application on amino acid industry has been discussed with a brief introduction of its current progress.

Key words Simulated Moving Bed (SMB), amino acid industry, preparative chromatography

信息窗

荷兰开发出生产高品质香料的膜技术

经过近 10 年的努力,荷兰科学家开发出一种新型的膜技术,可以生产高浓度、新鲜的天然食品香料。这种膜技术又称全蒸发技术,对特殊挥发性物质有极高的选择性,可分离出各种香味系列。产品具有极强的市场竞争力和高附加值。

据科学家介绍,与当前的技术相比,新技术在膜系统中使用了含有硅的聚合物,使生产的香料更细腻。同时使用该技术后,不需要再使用在香料提取中曾广泛使用的有机溶剂,加工过程也不需要高温来分离提取物。从而避免了产品受污染的危险,使产品更新鲜、更真实。

该技术一次可生产 1 L 至几升的香料浓缩物,可供水果、啤酒、药材、鲜花、咖啡、茶等香料提取物的生产者生产品质更上乘的香料产品。据悉,该技术目前已由荷兰一家大的果汁生产公司采用。