The role and importance of advances in separation techniques

The manufacturing process is made of two essential parts: the process itself that creates the desired product; this could be a mining operation, a fermentation process or a chemical synthesis; and the purification process that provides the finish product within specification and quality from the crude material produced. These two activities go hand in hand. One can improve the manufacturing process to improve the “crude” product but eventually some form or purification is still required. This could be a distillation, a solid/liquid extraction or a simple filtration. But the development of separation techniques to ensure the final product quality is up to the desired standard does not stop there. Refining the separation techniques and the tools associated allow us to test the quality of the finished product with more and more accuracy and precision. This allows us to understand better the manufacturing process by identifying the impurities and thus allows us to fix the process and improves upon it. These new or improved analytical methods, in turn, can also be converted into production tools (chromatography for example) to achieve greater efficiency and eventually to lower the manufacturing costs. In this presentation we will be discussing the need for purity in the pharmaceutical industry that drove the improvements in Separation Techniques.

Biography

Dapremont is a renowned expert in the implementation of continuous chromatography (SMB) for the purification of APIs. He started in 1992, developing the SMB technology for Prochrom in France, then joined Chiral Technologies to manage the kilo separation laboratory using SMB. He joined AMPAC Fine Chemicals (then Aerojet) in California, in 2001 to be in charge of the development of continuous processes. He has developed more than 50 SMB separations at all scale. Dr. Dapremont is a member of the Prep Symposium Organizing Committee as well as a member of the SPICA Scientific Committee.

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