

## Simultaneously reducing your API cost of goods and carbon footprint

Process liquors after first crop crystallization can contain up to 10% of the target high value active pharmaceutical ingredient (API), sometimes even as high as 15%. This previously lost material can now be recovered at high purity and reintroduced into the process prior to crystallization step, through the use of High Performance Continuous Extraction technology.

## This provides the following process benefits:

Cost effective supply of high quality material

Product to isolate

7.7% w/w

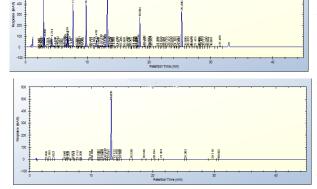
- Reduces the COGS of API produced by improving overall manufacturing efficiency of the production facility
- Eliminates the cost of waste disposal improving the green credentials of the production facility



Input material

Output material

(combined fractions)



Typical waste stream and product recovery analysis

Dynamic Extractions provides a GMP standard toll refining service that will take your process waste streams, recover the API at high purity - the example shown is >98% pure - and return it to you for reintroduction into your process stream. The high purity API can be returned within 1 to 3 weeks, saving 80% of the extra batch costs required to complete processing.

This service offering is a result of a 3 year industry funded project that was supported by both GSK and Pfizer. A toll refining offering allows access to the technique with minimal risk to the customer. Future on-site deployment of can be assessed for supply of equipment for on-site installation.

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