

Client
Location

SPC
Shepparton, Victoria, Australia

ACQUA/Muddy River Product(s): Induced Cyclonic Separator (IC-SEP*)/MASS

Objective

To achieve longer run times on an Ultra Filtration (UF) plant processing apple and pear juices, reduce Cleaning In Place (CIP) cycles and times and improve percentage yield (recovery) of fruit juices.

Background

Fiber and solids removal from food process streams has traditionally required the use of expensive centrifuges, decanters or filters. All these systems require high capital expenditure, maintenance and operating costs.



Solution

In order to offer the food industry a cost effective alternative to these expensive processes, ACQUA International (Australia) Pty Ltd has modified the revolutionary Induced Cyclonic Separator (IC-SEP*) system to create a totally hygienic fiber removal system.

The IC-SEP* system has dramatically improved the UF plant run times between CIP cleaning and considerably improved the percentage yield of fruit juices. Added benefits have been a reduction in maintenance costs and substantial reduction in the membrane replacement costs for the UF plant.

Prior to the installation of the IC-SEP* system, the UF plant continually fed fiber back into the feed tank as the clarified fruit juice was removed prior to evaporation. This caused the UF feed tank to fill with fiber, which required it to be dumped after running for less than 24 hours. The loss of juice and the loss of time for CIP was the driving force for installing the IC-SEP*.

The IC-SEP* draws fiber rich juice from the UF feed tank. It removes the fiber and returns the juice to the feed tank, thus ensuring continuous operation of the UF plant. With the IC-SEP*, operators are able to choose when to perform CIP, rather than have the necessity of CIP be dominated by physical constraints.