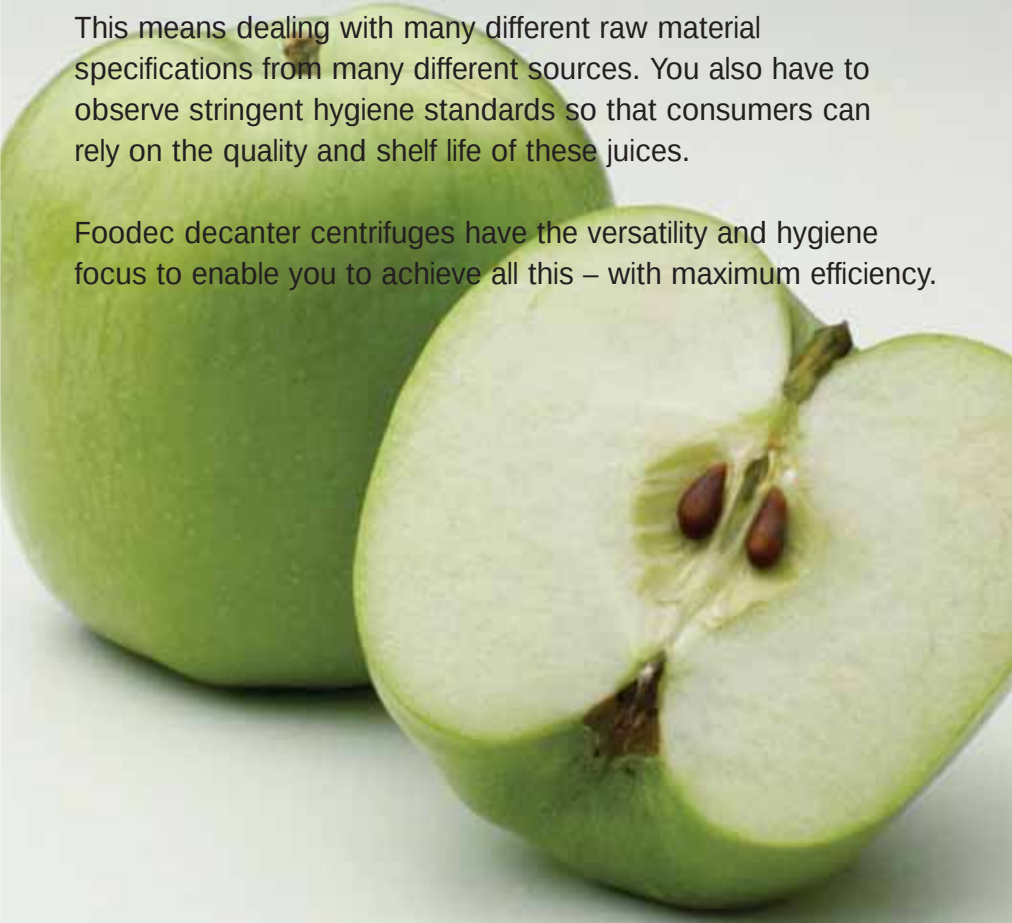




Fruit juices are now extracted from fruits of virtually all kinds, for sale on the international market.

This means dealing with many different raw material specifications from many different sources. You also have to observe stringent hygiene standards so that consumers can rely on the quality and shelf life of these juices.

Foodec decanter centrifuges have the versatility and hygiene focus to enable you to achieve all this – with maximum efficiency.



Alfa Laval in brief
Alfa Laval is a leading global provider of specialized products and engineered solutions. Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuffs, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

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Liquid logistics

Alfa Laval Foodec decanter centrifuges for fruit juice processing



One for all

Fruits are the most directly accessible foods available to mankind, and are therefore not surprisingly one of the major sources of vitamins and nutrition in the human diet.

However, fruit in its natural form has two unfortunate drawbacks. It is both perishable and easily damaged, and thus normally requires a complex, expensive logistics chain.

The commercial opportunities multiply greatly, however, if the fruit can be processed into juice – the next best thing to fresh fruit. Juice can then be packaged in aseptic, easily transportable containers that are less susceptible to damage and have a relatively long storage life.

Efficient juice extraction therefore opens up new market niches and profit opportunities for companies interested in tailoring their fruit products to the changing patterns of modern consumer demands.

The process Producers use a wide variety of techniques for processing different fruits into the almost innumerable varieties of juice now available.

However, the same basic techniques are used in making juice from all the more common groups of fruit – citrus fruit, berries and apples/pears. These are therefore normally processed using the same equipment. Juice extraction is always the heart of this process, and separation equipment plays a major part.

The general process of fruit juice making is simple. The fruit are picked, washed and then sized by milling, crushing or cutting. The juice is then extracted using either a juice extractor or separation equipment. If necessary, the must is then clarified.

For all fruit juice producers, maximum yield at minimum cost is crucial. They also have to deal with the varying availability, quality and characteristics of different types of fruit – most of which are seasonal products.

The Foodec benefits for fruit juice processing include

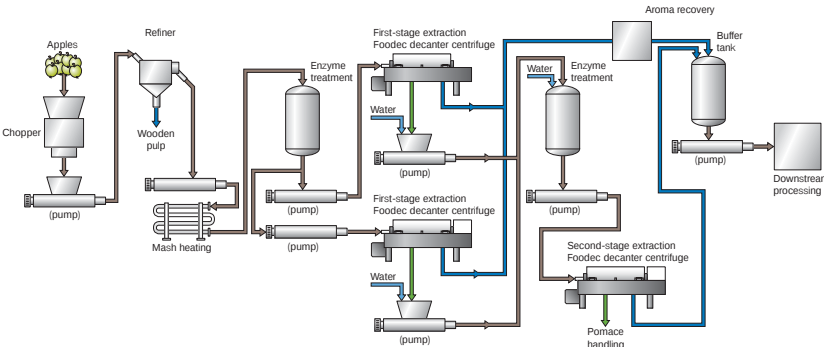
- better control, which means greater versatility, process efficiency and increased profit
- advanced sealing features that cut down on oxidation
- unparalleled hygiene standards that mean better product value
- better solids transportation that boosts solids handling capacity by up to 25%.

Producers therefore need their facilities to be versatile and flexible, so that they can use the same equipment for different types of fruit at different times.

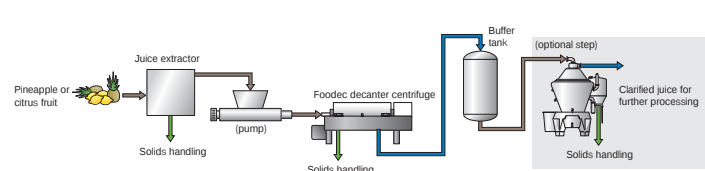


Fruit juice processing flow chart

Cloudy apple juice (primary juice) and concentrate (secondary juice)



Pineapple and citrus juice



Alfa Laval in fruit juice processing
Fruit juice making is a seasonal activity with only a limited production time every year for each type of fruit, and with the juice content varying according to the weather and soil conditions.

The equipment used for the juice extraction process must therefore be

extremely versatile and flexible, as well as efficient, reliable and suitable for continuous processing. Alfa Laval Foodec decanter centrifuges meet these requirements in full.

Juice extraction
The final yield of any fruit juice process depends on the efficiency of the extraction equipment used. In general,

the solid material in the mash amounts to 30–50%. This means that decisions about the most suitable equipment focus on solids handling ability.

Alfa Laval Foodec decanter centrifuges are specially designed to handle high levels of solids content during the separation process. By removing the solid matter and pulp, and then



clarifying the juice, the producer can control the colour, taste and overall quality of the end product.

Foodec decanter centrifuges also ensure the correct cake dryness and a suitable level of solids content in the juice. Dry cake with the correct consistency and juice with the desired clarity make the downstream processing of both the juice and solid waste easier and more cost-effective.

Control and versatility
Alfa Laval Foodec decanter centrifuges are highly efficient separation units that can be controlled with great accuracy. This makes it possible for the same machine configuration to handle different kinds of fruit mash. This versatility reduces installation costs and boosts the flexibility of the plant.

Furthermore, in processing lines where second-stage extraction is necessary, such as with apples, one Foodec decanter centrifuge can handle both duties with ease.



Dealing with oxygen pick-up and foaming
Oxygen has a crucial effect on the colour, taste and overall characteristics of the fruit juice. The operating environment therefore needs to be carefully controlled and monitored at all times.

This is why Alfa Laval Foodec decanter centrifuges are designed with a special seal system that limits oxygen pick-up during centrifugation, and thus helps ensure the required quality.

Benefit from Foodec decanter centrifuges in your fruit juice processing
The unique design of the Alfa Laval Foodec range enables you to virtually eliminate problems with oxygen pick-up and foaming, as well as maintaining high levels of hygiene and drastically reducing processing time.

Other important features include

- the new Alfa Laval Decanter Core Controller (DCC), which provides unprecedented control of all the Foodec functions, enabling you to work with a wide range of processing settings with no need for mechanical adjustments or set-up changes
- advanced sealing features that limit any possible intake of air, and thus greatly cut down on oxidation
- special sanitary design that enables you to match stringent FDA, 3A and USDA standards. The Foodec design also focuses on ease of cleaning
- better solids transportation that enables you to boost solids handling capacity by up to 25% compared with all other designs currently available – at no additional cost.

