



JUICE INDUSTRY

PROCESS:

Blending and keeping homogeneous during storage and transport

TYPE OF PRODUCT:

Juices from concentrate FCJ - regular fruit juices NFC

APPLICATION:

Keeping homogeneous in aseptic storage tanks
Dilution of the base product FCJ by adding water

We offer **maximum reliability,**
high durability and **stirring efficiency**

Process description

Fruit juices consist for a large part of water which can be evaporated. The resulting thick concentrate is transported all over the world and is finally diluted at juice production facilities. It's easy to see that this method saves huge amounts of money: transporting mere water is costly. On the downside components such as etheric oils must be added when the concentrate is diluted by mixing in water. If the juice, NFC, is transported as is, all components are still present in the product and it can be packed/bottled right away.

Fruit juice concentrate is diluted with water to create regular fruit juice, FCJ. The process is, from a mixing technique point of view, comparable to that of paint production. The concentrate must be "cut open" in order to mix it with water. The diluted/fresh juice has a low viscosity and is therefore in the turbulent phase during mixing which allows for fast mixing because the liquid flow is mixed quickly and chaotically. A side or top entry mixer is used which completes the process of homogenizing the juices fast, ready for filling/packaging.



References

Major players in the industry such as Döhler/Citrosuco/Zuvamesa/Continental Juice/Hiwa/Wild/Cargill/ FrieslandCampina to name a few, use JONGIA equipment in their production facilities. Installations are up and running world-wide from as far back as the early sixties.

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Product information

Requirements for the mixing equipment to be used depend on specific characteristics such as viscosity and density which vary considerably from one fruit juice to the other. Think for example of the differences between orange and pineapple or banana juice. To keep the product homogeneous our Magitator, a magnet driven mixer, is the right choice.

During the process it is very important to avoid oxygen intake because it breaks down vitamin C, clearly this must be prevented at all times. The Magitator ensures that the storage tank remains hermetically closed under highly sanitary conditions. The open design of the mixing head ensures an optimum flow for easy cleaning and efficient mixing. In addition the absence of a mechanical seal guarantees considerably cuts down maintenance costs

Fruit juice concentrate has a high viscosity (up to 25,000 cP) and is therefore in the laminar phase. The liquid blends in small layers, one on top of the other. Jongia's mixer for blending, is a slow running mixer with low installed power, a medium tip speed and a large working area in respect to the diameter of the tank. Batch times are relatively short, loss of vitamin C is kept to a minimum and stagnant areas in the vessel are being avoided.

For this particular duty Jongia recommends its mixer type LD with multiple counterflow elements/MTE, the mixing elements best suited for this process. The twisted tip of the multiple counter-flow element ensures even and efficient distribution of water in the concentrate. The UZ-turbines traditionally used for storage and blending are also part of our delivery program.



Process consultancy & testing

In synergy with you, our client, we envision the most efficient solution for your mixing application. Mixing techniques are put to the test in our in-house laboratory by our processing experts or on site with our rental test units.

Engineering, manufacturing & quality

Our engineering team is dedicated to designing robust and reliable, leading edge mixing equipment. The equipment is manufactured by skilled craftsmen on state of the art machinery. Every step is controlled by international quality standards.

Installation & global service

Installation, supervision and commissioning are performed by experienced field engineers. Rely on Jongia's 24/7 global service to assist you.

Jongia N.V.

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