

Tomato Ketchup (batch process)

CHALLENGE

To reduce the processing time of 60 min for a 1000kg batch. Reduce salt levels, and improve product quality whilst also utilising a small foot print.

SOLUTION

Using our 1000kg [Jet Cook Steam Infusion System](#) equipped with a single In-Line Steam infusion Unit and our [Recipe Manager Software](#), we followed the below process:

Water, acid, tomato paste (50%), seasoning, salt, preservatives and starch were added to the main processing vessel. With a bulk starting temperature of 20°C, we engaged the In-Tank Steam Infusion Unit on high shear and simultaneously heated and homogenised the ingredients to 70°C. The heating and unique mixing capabilities within the unit gelatinises the starch at a much lower temperature than traditional production methods and also hyper swells the granules. This process gives us a very large starch matrix, providing a larger surface area for the seasonings and salt to attach to. This allows us to reduce the % of salt in the recipe.

Duration - 8 mins approx.

At 70°C we added the remaining 50% of the tomato paste and mixed and heated the product to a final temperature of 92°C.

Duration - 7 mins approx.

The product was held at 92°C for 5mins and then discharged.

Duration - 10 mins approx.

Total processing time (1000kg) - 25 mins



"It is a pleasure working with such a forward thinking company who have some world leading technologies under their belt, but still understand the traditional values of a working partnership."

**Andrew McCallum - Technical Process Manager
Heinz**

OUTCOME

2000ltrs per hour of bright red Tomato Ketchup produced in a 2mtr square area in a single vessel.

The [Recipe Manager](#) allows the same quality of the ketchup to be produced consistently every time.

The salt was reduced by 10% in the total recipe, meeting the customers requirements.