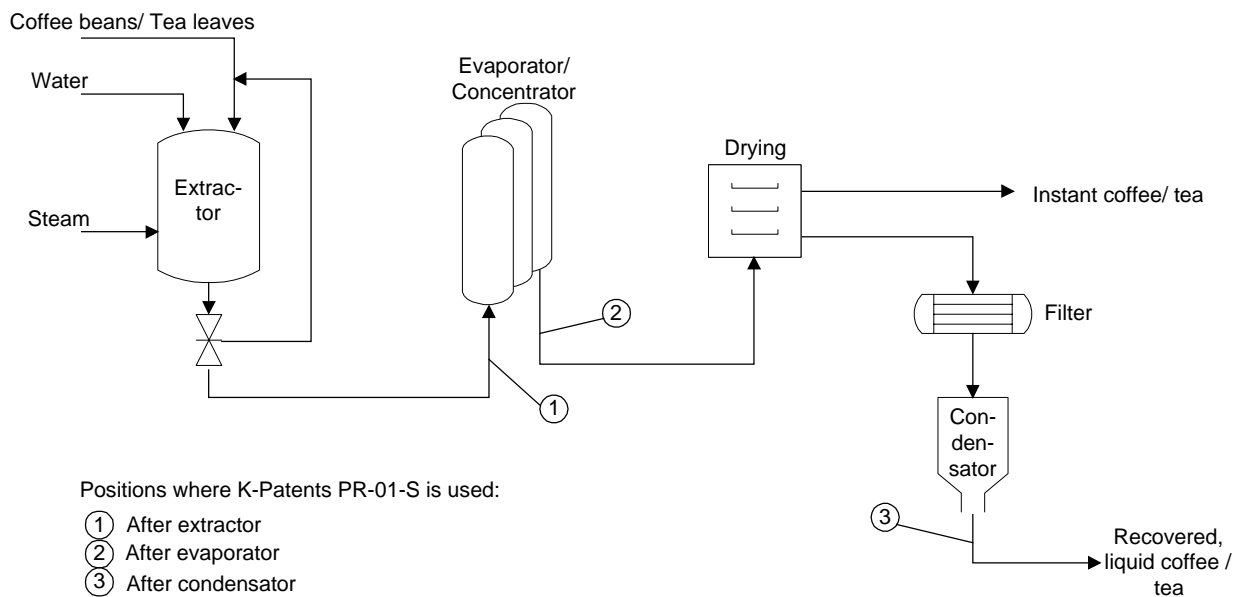


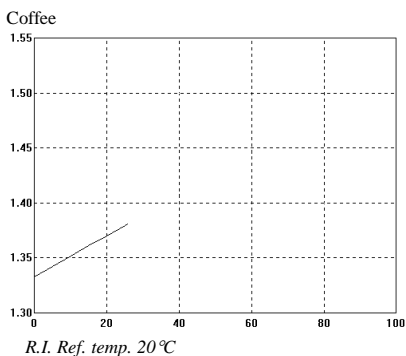
Instant Coffee and Tea



Coffee, Tea

Soluble in water

Chemical curve: R.I. per Conc%b.w.



Introduction

The manufacturing of instant stimulants like coffee and tea has increased greatly during the last decades. The taste of these ingredients depends on the quality and the brand of the raw material e.g. of coffee beans and tea

leaves, but also on how the volatile aroma has been successfully preserved.

Application

Instant coffee is manufactured by using a coffee extraction process. In extraction the coffee beans are boiled in water. The coffee extract is evaporated and dried by means of spray drying. The coffee dust which passes the filter is dissolved with steam and the recovered liquid coffee extract is returned to the process.

Tea leaves go through the same process as coffee beans: extraction, concentration and drying. The most difficult part in instant tea process is the aroma preserving.

Installation

K-Patents Process Refractometer, PR-01-S is used to measure the effectivity of the extraction. Typical measurement range is 0-30 Brix and the normal process temperature is 5°C (41°F).

K-Patents PR-01-S is also used to measure the concentration of recovered instant coffee dust after filtration. Typical measurement range is 8-20 Brix and the normal process temperature 75-85°C (167-185°F).

The evaporation is a triple stage process, with concentrations of 10-20% dry solid, 15-30% dry solids and 35-65% dry solids. Under normal circumstances the process temperature is 52-82°C (126-180°F).

A prism cleaning with steam is recommended in both applications.