



# NAS NARAN LIME JUICE

## SMALL-SCALE MANUFACTURE

Nas naran is a variety of lime which has a less sharp flavour than most other varieties, making it a more refreshing drink. The skin of the fruit has a glossy and dimpled appearance.

### Recipe

Juice	14%
Sugar	12%
Water	74%
Preservative	Sodium metabisulphate 230ppm. (0.023%) (70ppm SO <sub>2</sub> )
Colouring	A few drops of green food dye if necessary

### Method

Wash whole fruits and discard any fruit which is bad.

Cut the fruits in half and squeeze out the juice by hand or with a squeezer (this can be two grooved wooden rollers). Separate the seeds from the juice by squeezing through muslin cloth.

Mix the sugar with the water and filter the solution through a muslin cloth. (Sugar often contains a lot of dirt and foreign bodies.) Heat the sugar syrup to 95°C then add the Nas Naran juice, heat the mixture to 90°C, add the preservative, heat all the ingredients at 90°C for 1 minute. Then start the filling operation maintaining the temperature of the juice at 90°C.

Hot fill the juice into bottles which have been cleaned and then steamed to sterilise them, and are still hot so they do not crack when hot juice comes in contact with them. The bottles should be filled as quickly as possible so that the juice is not heated for longer than necessary, or recontaminated because it has cooled down before being sealed in the bottle. The lip of the bottle should be clean and dry (wipe with clean tissue paper) before placing the cap on it. Lay the bottles on their side to cool for 15 minutes. This is a most important step to avoid contamination while the cap fits firmly down onto the glass lip as the vacuum forms.

### Equipment list

Bottles, crown caps and labels  
Crown capping machine  
Cooking facilities, gas ring, electric ring, etc  
Stainless steel saucepan  
Thermometer in protective jacket  
Stainless steel cutting knife and spoon  
Wooden spoon for stirring  
Steam generator/Cutting board/Scales  
Measuring cylinder/Funnel  
Liquidiser/Muslin

### Reference and Further Reading

*Lime Oil and Juice*, Practical Action Technical Brief  
*Mixed Fruit Juice Manufacture*, Practical Action Technical Brief  
*Fruit Juice Processing*, Practical Action Technical Brief  
*Small-scale Production of Ready-to-drink Pineapple Juice*, Food Chain No27 Oct. 2000