

# ALIEN PROPERTY CUSTODIAN

## YEASTY REMEDY AND METHOD OF PREPARING THE SAME

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The present invention relates to a method of preparing an yeasty remedy, which consists in cultivating and propagating yeast of torula family in mash containing a large quantity of pentose or pentosan, the object thereof being to obtain an effective nutritious product cheaply from an almost waste material.

Alcohol yeast, viz. *saccharomyces cerevisae* contains vitamin B<sub>1</sub>, nucleic acid and other various kinds of medically and nutritiously effective ingredients, but for its propagation, starch, monosaccharose, disacchorose, etc. must be employed as nutrient mediums. As pentose is unassimilable, pentose or pentosan-containing materials such as straw, rice bran, the core of Indian corn, bamboo sheath, etc. have hitherto been almost neglected as to their use as the principal materials for alcoholic fermentation or the cultivation of yeast and their large quantities have been cast away as useless. Now, according to this invention, by utilizing ingeniously the property of yeast of torula family which ferments not alone monosaccharose, but also even pentose by assimilating them easily and using the above-mentioned almost waste material as a nutrient medium, torula yeast is propagated, thus producing a medically and nutritiously effective yeast material at a very small cost.

The following is an example of performing the present invention:

The core of Indian corn is steamed together with 1% of dilute sulphuric acid solution in an autoclave under a pressure of 50 lbs. per sq. inch for 30 minutes, so that dextrose and a large quantity of pentose may be produced by hydrolysing carbohydrate. Next, the dextrose and pentose solution thus obtained are neutralized with calcium carbonate, and adding 20% of ammonium sulphate and 5% of mono-calcium phosphate yeast nutriment upon the entire sugar content and inoculating pure cultivated special torula yeast thereto, they are held at 15-25° C. and propagated, while blowing air thereto, they are held at 15-25° C. and propagated, while blowing air therein upon completion of the fermentation in about 40 hours, torula yeast is separated by a centrifugal machine and then is dried under reduced pressure. In this way, it is possible to obtain a product consisting

of about 53% of dry torula for the sugar contained in the mesh.

The torula yeast utilized in the foregoing example has been found by the inventor and possesses the following important property:

(1) It is aerobic and mostly with the major diameter of 2-4μ (micron) and the minor diameter of 1.5-2μ (micron). It rarely has a globular shape with the size 3-4μ (micron). Its juvenile cell hardly has any oil drop.

(2) It does not form a spore.

(3) When it is cultivated in "Koji" extract, it is propagated and fermented actively. It forms a considerably thick humid ring and film and the cultivated liquor presents an almost transparent condition.

(4) When a giant colony is formed in "Koji" extract gelatin (in 6 days at 27-28° C.), it is slow to grow and assumes a slightly greyish white color. It is flat and substantially round with a radiating border and is hardly wrinkled and is uneven with a ring at the center.

(5) When it is stick-cultivated in "Koji" agar, the colony has a round shape and white lustre with a slightly protruded center and uniform border.

(6) The fermentable sugars are glucose, fructose, mannose, saccharose and raffinose, while the non-fermentable sugars are galactose, maltose, lactose, arabinose and xylose.

(7) Temperature for the growth.

	° C.
Maximum temperature.....	41-42
Minimum temperature.....	14 below
Optimum temperature.....	28-39

(8) The most suitable temperature for the formation of a film and ring is 30-38° C.

As compared with the known yeast product like *saccharomyces cerevisae*, the product of this invention contains considerable quantities of complex compounds of vitamins B<sub>1</sub> and B<sub>2</sub> and therefore is very effective as a remedy.

When in this invention the straw of rice-plant, rice bran, bamboo sheath, etc. are employed as the materials for the mash, they may be treated according to the above example.

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