

# No Cook™ Enzyme Recipe for Corn

## Step 1: Preparation of corn kernels

1. Run whole corn kernels through a 30 mesh screen. Basically the finer the end product the higher the ethanol content in your mash product will be. Refer to the chart on your No Cook™ specification sheet for more information on the screen size and the mesh sized used to obtain the desired ethanol output in your mash/beer solution.

## Step 2: Add water

1. For every 4.5 kg (10 lbs) of corn add about 15.1 liters (4 gallons) of water. Make sure you have good quality water! Mixture should be 70% water and 30% corn.
2. Water temperature should be between 20 - 40° C ( 68° - 104 F)

## Step 3: Stir completely till water and corn mix is mixed completely

**Step 4:** Add between 1.0 - 2.5 kg (2.2 lbs - 5.5 lbs) per metric ton. A metric ton is 1000 Kilograms. 1000 Kilograms is 2,205 pounds or about 1 ton. Please see the table included with your order. When measuring use DRY weight of your corn and NOT the weight with water.

## Step 5: Adjust your pH

1. Adjust your pH to 4.5. Use a pH meter or litus paper to measure the pH. If to high add acid, if to low add an alkaline solution.

## Step 6: Add your yeast of choice

1. This can be almost any type of yeast. The yeast can be added to the mash within 10-15 minutes after pH adjustment takes place. Use yeasts that tolerate high levels of ethanol in your mash during fermentation. Hi levels is up to 15% or higher.

## Step 7: Let ferment

1. Ferment in temperature of 32° C (90° F). You may have to add a small amount of additional heat to your fermenters depending on what your ambient temperature are surrounding your fermenters. Fermentation time is about 72 hours to reach maximum ethanol production.

The optimal usage level of No Cook™ 001 is dependent upon processing parameters such as raw material, particle size, viscosity, processing time, pH, temperature and Dry Solids (DS). A minimum dosage of 1.0-2.5 kg/Metric Ton (MT) of grain solids (not wet grain) is recommended under most fermentation conditions.



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