How Malt Extract is Made

First, the Barley is *Malted*

The *malting stage* consists of wetting huge quantities of raw barley grain in order to start the grain's natural *germination/sprouting* process. During malting each *kernel* undergoes certain chemical changes. Specifically, starches are converted into sugars: insoluble starches are broken down into simpler soluble starches, and desirable enzymes needed for further starch degradation are formed. The kernels are then air-dried and their sprouted *rootlets* removed by tumbling. This produces what are called *malted barley grains* ("malts"). Then, the tiny malted kernels are *kilned* (heated), either lightly to be used as *base malts,* or further kilned to create the darker, more flavorful *specialty or dark malts*. Base malts are called such because they form the fermentable foundation ("base") for all the other ingredients in your beer's recipe.

Next, the Malted Kernels Are *Mashed*

In this step, called the *mashing stage,* the malted barley kernels are *milled* ("cracked") to allow water to penetrate them, mixed with a measured amount of hot water and left to *steep* ("soak") at approximately 65˚ for one hour. At this point it is called "mash". Those enzymes that were created during the previous *malting stage* now become activated by the hot water and begin converting starches into various sugars. These sugars are what the yeast will soon "eat" to begin making your beer in the upcoming fermenting process.

Then, The Sugars Are Collected As *Wort*

This is the *sparging stage ,* wherein the sugars are *sparged* ("rinsed-out") from the mash using hot (76˚) water. The saved run-off is a very sweet liquid called *wort*, which is then collected in large, stainless steel kettles.

Finally, Liquid or Dry Malt Is Extracted

In this final stage the sweet wort is ran through a low-temperature vacuum-evaporator to remove water. To produce liquid malt extract 80% of the water is removed from the wort. To produce dry, malt extract (DME) 100% of the water is removed

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