

Stuart from Tasmania wants to try home malting Melanoidin malt. First question Stuart - have you already tried malting barley? Was it successful? Melanoidin is a difficult and process intensive malt to produce which is why so few maltsters outside of Germany offer the product. You will need to be very comfortable with your malting process to be able to get the necessary control to get the melanoidins to develop. Actually most malts have some melanoidins - these are the colour and flavour agents that give malts their individual characteristics. Melanoidin malt takes this flavour and colour development several stages further. Melanoidin malt still has some levels of active distase and will convert itself, albeit slowly. Colours vary considerably - the Hoepfner brand we stock is usually around 40 EBC (specs online at www.maltcraft.com), Gambrinus "Honey Malt" is 50 EBC and Weyermann is darker again at 70 to 80 EBC.

A bit of background info: Melanoidin malt or Brumalt as the Germans have traditionally called it, is like a "super Munich" - think "Munich on steroids" with pronounced malty aromas, flavours and a reddish colour. It is produced from a high protein "green malt" with a moisture content approaching 50% and is very well modified - ie the acrospire will need to be grown out to at least 100%. In the latter stages of germination, ventilation to the malting box is turned off allowing the buildup of CO₂. This causes two things - (1) germination is terminated, and (2) the temperature of the malt rises. While the actual germination process is no longer occurring, the enzymes are still active producing a range of simple sugars and amino acids. These are the building blocks of the Maillard effect which will later produce the melanoidins in abundance.

The next stage is kilning off the still moist malt. Drying will be longer than for normal malt and some "stewing" of the grains will occur in the 60 to 65C range. Final curing will typically be in the mid 90C range although the darker colours will probably require 100 to 105C.

Wes Smith Aussie Homebrewer forum

Gambrinus Honey Malt

Brumalt: high protein, well steeped. Aeration stopped after 3.5 days of germination. Temperature reaches 45°C in 36 hours. Held for 18 hours. The high temperature stops embryo growth, but allows enzyme activity. High level of low MW sugars, amino-acids and peptides, but still enzymic (depending on kilning temperature).

Special malts and new twists in malt grists Scandanavian Brewers review vol.65 No 1 2008

1.4.1 Colour malts

This type of specialty malts is produced with a kilning program, which starts quickly about 63°C when the malt still has considerable moisture content, and progressively the temperature of kilning is raised to a final temperature of approximately 99°C. The intensity of drying air for kilning is much higher than that used for pilsner malt production. The higher humidity of the drying air for the production of coloured malts carries much more energy making it able to increase the temperature of the malt bed much more efficiently. The intensity of the kilning cycle and moisture content of air play a relevant role in the flavour profile and final colour of these malts (Gretenhart, 1997). However, the malting procedures can be varied depending on the physicochemical and sensorial attributes of the colour malt desired by the brewer. A particular case is the

production of melanoidin malt also called “turbo Munich”, Brumalt (Brühmalz) and rHmalt, in which a desirable formation of specific melanoidins in malt is induced by intensive germination at 18°C to 20°C for 5 to 6 days with a further carbon dioxide rest at the last 36 hours of this process stage. This latter procedure is carried out by stacking the germinated grain in uniform heaps of about 1.5 m height covered under a tarpaulin to induce production of carbon dioxide and self-heating by the grain respiration. This restrains the seedling respiration and growth but the activity of the endogenous enzymes remains intact at relative high temperatures (ca. 40°C to 50°C) producing large amounts of low molecular sugars and amino acids that participate in the formation of melanoidins across non-enzymatic browning reactions during the free drying kilning phase (e.g. 55°C to 60°C for 9 to 11 hours) and the forced drying kilning phase (e.g. 85°C for 3 to 4 hours). Besides, esters and organic acids are produced but in minor extent. The withering and kilning procedures are upon the malting factory specifications but in any case the green malt is further “stewed” (gebrüht). These types of malt greatly promote flavour stability and mouthfeel. Besides, they have high degree of modification, excellent friability, and

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low hemicellulose (e.g. β -glucans and pentosans) levels and are highly acidic and malt aromatic. They confer a broad colour range from deep-amber to red-brown in beer (Kunze, 1999; Narziß, 1995; Weyermann Malzfabrik GmbH, 2007).

Impact of the colour adjustment on flavour stability of pale Lager Beers with a range of distinct colouring agents.)Thesis) Andres Furukawa Suarez.