BREWIN' WITH BRIESS

Volume 7, Issue 6 | *Availability | Selection | Consistency* | November-December 2002

Fresh from America's Heartland...

- ✔ Base Malts
- ✔ High Temp Kilned Malts
- ✔ Caramel Malts
- ✔ Special Processed Malts
- ✔ Dark Roasted Malts
- ✔ Cara-Pils® Malts
- ✔ Rye Malt
- ✔ Roasted Barley
- ✔ OCIA Certified Organic Malts
- ✔ Pure Malt Extracts
- ✔ Flakes & Colorants

Brewin' with Briess is published six times a year by Briess Malting Company for our customers and friends in the brewing industry. Please send address changes to:

Brewin' with Briess, Briess Malting Company
PO Box 226
Chilton, WI 53014

www.briess.com

Turning up the heat

High Temp Kilned Malts contribute pronounced malty flavors

Base malts are typically kilned with a finish heat of 180-190 °F for two-four hours which develops flavors ranging from very light malty (Pilsen Malt) to subtle malty (6-Row and 2-Row Base Malts).

But many ales and lagers are distingished by pronounced to intense maltiness (i.e., Oktoberfest, Scottish Ale, Bock, ESB), flavors which are often best achieved using High Temp Kilned Malts as part of the grist.

High Temp Kilned Malts are just that—malts finished at higher temperatures usually for longer periods of time to develop more complex, malty flavors and richer colors.

At Briess we have developed seven distinctive High Temp Kilned Malts—Vienna, Pale Ale, Ashburne® Mild, Bonlander® Munich, Aromatic, Munich 10L and Munich 20L. Each has its own unique characteristics and applications. Because more intense kilning decreases the diastatic power of the finished malt, some have little enzymatic action and are not suitable to be used as a base malt. These are best used in smaller amounts and can help to balance flavors in almost any beer style.

Turn to page two for more about the Briess line of High Temp Kilned Malts.

Varying temperature and length of kiln develops flavors unique to High Temp Kilned Malts.

Briess High Temp Kilned Malts:

Vienna (3.0-3.6)
Pale Ale (3.2-3.8)
Ashburne® Mild (5.0-5.5)
Bonlander® Munich (8-12)
Aromatic (17-23)
Munich 10L
Munich 20L

Season's greetings never tasted better

This year the Briess corporate holiday greeting card starts a new tradition when it features a "malt art" illustration created by the daughter of one of our employees.

Stacy Krebsbach is the eight-year-old daughter of Connie (Customer Service) and Tom Krebsbach. Stacy was among a number of children and relatives of Briess employees who responded to an invitation to create a "malt art" holiday illustration for the corporate holiday greeting card. Artists ranged from three to 15 years old. Stacy's image was selected for the card, but the youngsters did such nice work we are featuring all their illustrations on our website.

After Thanksgiving, visit www.briess.com to view the work of these talented children.

Meet Stacy, "malt artist" and eight-year-old daughter of Connie Krebsbach (Customer Service).

We make seven types of High Temp Kilned Malt

VIENNA MALT (3.0-3.6)
Diastatic Power 120-140

Briess Vienna Malt has a complex maltiness with a light to dominant toasted flavor. It can be used in place of Base Malt and imparts golden to copper colors. Besides brewing Vienna style beers with it, try 10-30 percent along with Briess Pilsen Malt (0.9-1.1) for a great Pilsner Beer. Or, for a light colored amber ale, use 40% Vienna Malt along with Caramel Malt.

PALE ALE MALT (3.2-3.8)
Diastatic Power 80-100

Briess Pale Ale Malt also has enough enzymatic action to make it a successful base malt. Briess Pale Ale Malt is a 2-Row malt with rich malty flavors that lends itself particularly well to English style ales such as IPA, ESB and bitter beers. It will impart golden hues.

ASHBURNE® MILD MALT (5.0-5.5)
Diastatic Power 60-90

A 2-Row Malt, Briess Ashburne® Mild Malt is darker and slightly maltier than Pale Ale Malt, with enough enzymes to make it a successful base malt. It is particularly well suited for beers that require a darker Vienna-style malt for color adjustment and increased maltiness. Primary applications include Altbier and Kolsch (10-20%), and Oktoberfest and Vienna (10-25%). Others include English, Irish and Scottish Style Ales for complexity and character.

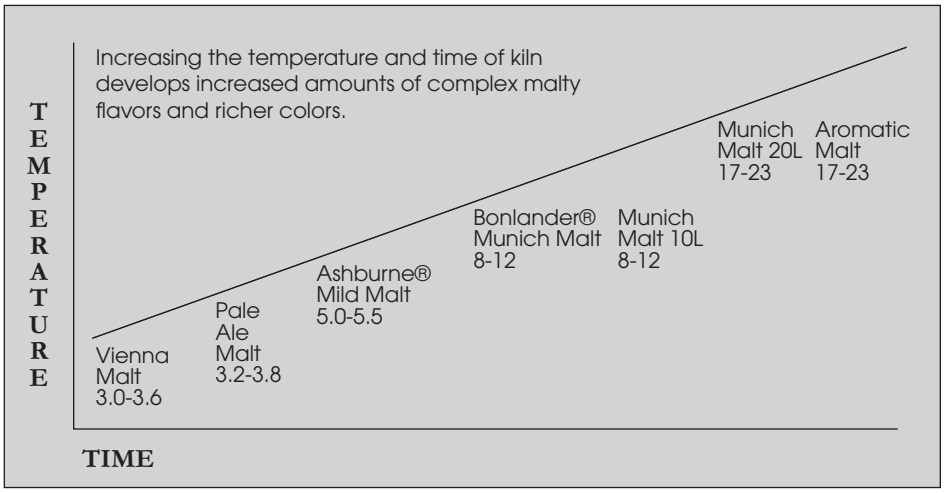
BONLANDER® MUNICH MALT (8-12)
Diastatic Power 30-50

A 2-Row munich-style malt, Bonlander® Munich Malt imparts both maltiness and sweetness. Exceptionally smooth, Bonlander Munich Malt can comprise up to 90% of the grist bill in a traditional Bock Beer. Use 5-15% in Oktoberfest, Vienna and Amber Ales for a sweet malty flavor and rich golden-orange hues.

MUNICH MALT 10L (8-12)
Diastatic Power 45-55

Munich Malt 10L offers a very prounounced malty flavor. For Bock and other dark lagers, use 10-30% for a robust malty flavor and golden to orange hues. For Amber Ales, use 5-15% along with 3-10% Caramel Malt to round out the flavor and add color and body.

Turn to Page Three



High pH, low solids

. . . . . from page four

with calcium sulfate, dark malts or acids, some overlook pH treatment of their sparge water. Where alkalinity is a problem, it is often best to treat all brewing water at once in the hot liquor tank. This will result in a lower pH of the final runnings and eliminate the need to adjust the mash pH. When this is not possible because of production constraints, inline treatment of sparge water may be considered. Chemical suppliers may be able to provide small dosing pumps that can dose acid inline during sparging.

Low solids of the final runnings is a separate problem. Most brewers stop collecting at about 2 ºPlato (1.008 S.G.), although some stop anywhere from 1-4 ºP (1.004-1.016). Depending upon the initial amount of water in the mash (determined by the liquor to grist ratio), this low solids level may be reached before the required kettle volume is obtained.

If the standard practice of running first worts until the level is just above the grain bed before initiating sparging is followed, then when the level of wort solids begins to drop during collection, they drop very quickly. By the time weak worts is reached (typically the last third of the collection) there is nothing left to extract. Essentially, solids have been so efficiently extracted at the front of the cycle that there is nothing left to extract at the end and hot water is running over the spent grain to achieve correct kettle volume. There are, however, other ways to add the needed water.

Adding water to the kettle is often the most simple and easiest solution. Additional water may be added to the lauter tun. As mentioned before, however, low final runnings may result if water is added at the end of the process as sparge water. Instead, try adding water at the beginning of the lautering process. If sparging is started right away during wort collection, wort will immediately dilute and solids levels will drop more gradually during collection. Because of the gradual decrease in solids, the final runnings and wort left in the grain at the end of collection may be higher in solids and some loss in yield may result. However, the final runnings pH should be lower as it will benefit more from the buffering power of the the first wort.

Finally, adding water during the mash (changing the l/g ratio), is also a good solution. This may change the final product, however, because mash thickness influences the activities of the enzymatic groups. A good solution often employed is to mash at the recipe's desired l/g ratio, and add water during the mash off before transfer to lauter. Again, this allows the added water to be affected by the buffering ability of the mash. The resulting runoff can be managed as usual, and runoff will usually be easier due to decreased wort viscosity.

'Together we make a difference..."

When Customer Service Week rolled around recently, Briess adopted the theme "Together We Make a Difference" and held a series of activites to celebrate the week. We admit we got a little carried away and are fortunate that no one got hurt during Office Olympics or the Hockey Game. But a result of one of the more passive group activities is this colorful quilt. It's made of 8-inch squares decorated by Briess employees who used paint, yarn, sequins or anything else they could get to stick to their 8x8 inch square. They were asked to apply an "American Theme" to their Customer Service Week square.

Creators are (seated left) Kay Dedering—reception, (seated right) Kathy Schroeder—accounting, (standing, left to right) Connie Krebsbach—customer service, Penny Pickart—malt sales, Debbie Boettcher—traffic, Ann Casper—promotions, Brad Rush—quality, Judie Giebel—quality, Gordon Lane—president, Vicki Stenklyft—reception and accounting, Kris Boll—customer service, Lisa Manz—accounting, Carol Field—customer service, Carl Siebert—board of directors, Kris Vogel—accounting, Laurie Franz—food sales, Bernadette Wasdovitch—promotions, and (not pictured) Bob Hansen—R&D, and Leona Propson—purchasing.

Malts. . . . . from page two

MUNICH MALT 20L (17-23)
Diastatic Power 15-30

Munich Malt 20L is darker than Munich Malt 10L and has a more pronounced malty flavor than our other munich-style malts. Small amounts will add lots of malty flavor and rich orange hues. Try 5-7% in Bock and other dark lagers for robust malty flavor.

AROMATIC MALT (17-23)
Diastatic Power 10-20

Rounding out the Briess High Temp Kilned Malt category is 2-Row Aromatic Malt, a munich-style malt that will impart a toasty bready flavor, intense aroma, and golden colors. Use 2%-40%.

Holiday shipping schedule announced

Winter and the holidays are fast approaching. Snowy weather and holiday schedules can both affect malt shipments, so we encourage you to plan your shipments well in advance. Save this holiday shipping schedule and, if you have questions, please don't hesitate to call us at (920) 849-7711.

Chilton Schedule:
Thursday, Nov. 28: No shipping
Friday, Nov. 29, No Shipping
Monday, Dec. 23: SHIPPING
Tuesday, Dec. 24: No Shipping
Wednesday, Dec. 25: No Shipping
Thursday, Dec. 26: SHIPPING
Friday, Dec. 27: No Shipping
Monday, Dec. 30: No Shipping
Tuesday, Dec. 31: No shipping
Wednesday, Jan. 1: No Shipping

Satellite Warehouse Schedule:
Thursday, Nov. 28: No shipping
Friday, Nov. 29, No Shipping
Monday, Dec. 23: SHIPPING
Tuesday, Dec. 24: No Shipping
Wednesday, Dec. 25: No Shipping
Thursday, Dec. 26: SHIPPING
Friday, Dec. 27: SHIPPING
Monday, Dec. 30: No Shipping
Tuesday, Dec. 31: No shipping
Wednesday, Jan. 1: No Shipping

BRIESS MALTING CO.
PO BOX 226
CHILTON, WI 53014

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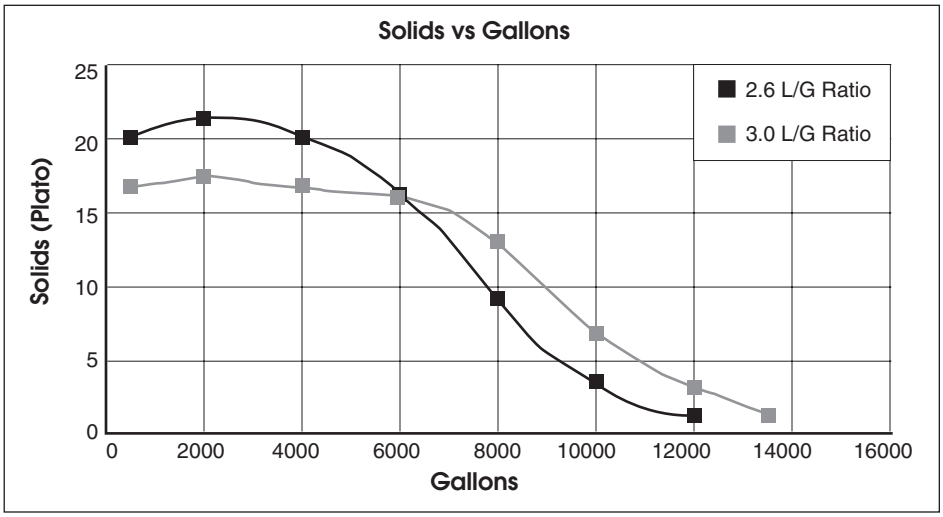
Hey Bob, what's the best way to compensate for high pH in the final runnings?

Bob Hansen is a research chemist with the Briess Malting Company Technical Team. Bob commissioned the brewhouse in the new extract plant in February, performs research and development, and offers technical assistance to customers. Bob attended the Siebel Institute of Technology and holds a Bachelor of Science Degree in Biochemistry/ Applied Math and Physics from the University of Wisconsin-Milwaukee. Prior to joining Briess, he was a brewing consultant and brewmaster for Water Street Brewery in Milwaukee.



This graph illustrates wort solids collected off the lauter tun from two same-size brews made with different liquor to grist ratios. Runoff was halted at 2 ºP for each brew. The dark line indicates a brew mashed with a 2.6 l/g ratio that yields 12,000 gallons of wort at 15 ºP. The light line indicates a brew mashed with a 3.0 l/g ratio that yields 13,500 gallons of wort at 13.3 ºP. If 13.3 ºP wort is desired from the brew made with a 2.6 l/g ratio, then an additional 12% (1,500 gallons) of water needs to be added somewhere in the process. The problem of low solids and higher final runnings pH are especially apparent with a low gravity beer made with a low liquor to grist ratio if the additional water is added as sparge water.

The problem of high pH in the final runnings was recently raised by Steve Bradt of Free State Brewing Company when Mary Anne Gruber and other members of the Briess technical team answered questions on the IBS Online Brewers Forum. First, thanks to the Forum for giving us the opportunity to answer questions related to malt and brewing. Second, thanks to everyone who posted questions. All the questions and our responses are posted on the Briess website at www.briess.com.

Now back to the topic raised by Steve. Steve was having a problem with low solids and high pH of his final runnings, especially when making lighter style beers. Why is that a problem? Because higher pH and low solids both extract undesirable substances from the grain which result in harsh, off flavors in the finished beer.

"Aside from playing with the water:grist ratio or adding water to the kettle, do you have any recommendations for how to compensate?" Steve asked.

This is two separate but related problems. The first problem is high pH of final runnings, which is caused by having alkaline (higher pH) sparge water. While many brewers acidify their mashes

Continued on Page Two