

PURPOSE

Perform modified ASBC hot steep method to prepare wort samples from various malts, and to use these samples for sensory evaluation.

MATERIALS

- 16-ounce canning jar with lid
- Immersion heater
- Hot water bath maintained at 65°C/150°F
- Plastic funnel with ~500 ml volume
- Fluted filter paper, fluted, 32 cm in diameter (Ahlstrom No. 515 or similar)
- Electric coffee/spice grinder
- Graduated cylinder to measure water
- Kitchen scale capable of weighing 50.0 g
- Deionized water
- Whole kernel malt samples
 - ✓ Rahr North Star Pils 2-row malt (low-impact reference)
 - ✓ Weyermann® Isaria 1925 Malt (100%; see Note 1)
 - ✓ Gambrinus Honey Malt (15%; see Note 1)

BASIC STEPS

1. Place approximately 52 g of malt in electric grinder.
2. Close lid and grind for 10 seconds or until a course flour consistency is achieved.
3. Weigh 50 ± 0.1 g of malt flour into canning jar.
4. Pour 400 mL of 65°C water into canning jar.
5. Cap and vigorously shake for 20 seconds to ensure malt grist is completely wetted and mixed
6. Place canning jar in hot water bath and let sit for 15 minutes.
7. During this time, place filter paper inside funnel and wet paper with deionized water to minimize aroma contribution.
8. Position filter and funnel into empty canning jar and leave until use for wort collection.
9. When 15 minute hold is complete, vigorously swirl contents of canning jar for 20 seconds to bring settled particles back into solution, uncap, and quickly pour all of mash liquid into filter (see Note 3).
10. Collect and pour first 100 mL of filtrate back into canning jar used for sample preparation.

11. Swirl wort with sample residuals, then gently repour back into filter. Allow wort to filter to completion (see Notes 4–6).
12. Evaluate the samples prepared by your group using the data sheet below.

NOTES

1. Evaluate base malts with 50 g of sample (100% inclusion), specialty malts with 25 g of sample and 25 g of brewers base malt (50% inclusion), and dark-roasted specialty malts with 7.5 g of sample and 42.5 g of brewers base malt (15% inclusion).
2. If different malts are to be milled, clean electric grinder with a dry rag in between samples to prevent cross-contamination.
3. The entire contents must be poured through the filter at once so that the grain bed can settle without being disturbed. Filter paper should be free of aromas and large enough to hold the entire contents of the canning jar.
4. Filtration rate and sample yield will be influenced by malt type and modification level. Approximately 300 mL of wort can be collected in 30-45 minutes (serves six to eight tasters).
5. Perform wort sensory evaluation within 4 hr of filtration. Serve at room temperature.