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«Development of probiotic drink production technology with the addition of citrus juice»

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Problem statement

The development of kvass with orange juice was based on solving such problems as:

• selection of the optimal recipe;
• setting the dose and addition stage of extra components;
• research of kvass samples made from different yeast and LAB strains;
• establishing the shelf life of the product.
Solution methods

Investigated characteristics:
• Organoleptic (appearance, color, taste, aroma, CO2 saturation);
• Physicochemical, such as:
  • mass fraction of dry matter – refractometry;
  • acidity – titration method;
  • alcohol volume fraction – distillation+pycnometry;
  • fermentation degree (apparent, real).

Used yeast and LAB strains:
• S. cerevisiae (baking yeast, dry);
• S. cerevisiae (San Francisco Ale II-BSG-005A strain, liquid);
• L. acidophilus (lyophilisate);
• L. fermentum (bacterial starter).
Conclusions

The highest scores were obtained for samples made from acidophilic LABs, which are commonly used in milk production rather than fermentation products.

The development of original Russian drinks is one of the key vacant market niches.

- Organoleptic characteristics: All samples received "good" and "excellent" marks;
- Physicochemical characteristics: All samples fully comply with the requirements of the standard;
- The optimal shelf life of the developed kvass is 5-6 days.
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