

KVASSISTENT — human quick guide

Homemade Zhizha kvass, hot weather, sunlight, and alcohol limits

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What this is

KVASSISTENT helps a person make homemade Zhizha kvass and gives AI agents a separate state-management protocol. Version 1.1.1.1.1 adds researched rules for 28°C fermentation, direct sunlight, and honest alcohol estimates.

3-liter baseline

- water — 3 l;
- fully dry bread crackers — 180–220 g;
- preferably 150 g white + 50–70 g rye or Borodinsky;
- sugar or panela — 100–120 g;
- malt — 20–30 g or rye flour — 10–20 g;
- first batch: 0.5–1 g dry or 2–3 g fresh yeast;
- later batches: 500 ml old kvass or 3–5 tbsp sediment.

Short process

1. Toast bread dark golden.
2. Infuse in boiling water for 4–8 hours.
3. Strain and keep only the liquid.
4. Add sweetener and cool to 25–35°C.
5. Add starter and cover with cloth, gauze, or a loose lid.
6. Ferment 8–12 hours; at 28°C check after 4–6 hours.
7. Bottle in plastic when smell is normal and bubbles are present.
8. Condition for 2–6 hours and refrigerate as soon as the bottle becomes firm.

28°C heat and sunlight

28°C **in shade** is acceptable but fast. Never keep the jar in direct sunlight: the liquid can become much hotter than the air. Move it to shade, measure liquid temperature, and check it frequently.

Operating zones:

- 18–24°C — steady;
- 25–27°C — fast, check from 6 hours;
- 28–30°C — hot, shade only, check from 4 hours;
- 31–34°C — move cooler;
- 35°C or above — cool and stop the household protocol.

Will it reach 8% in two weeks?

Not automatically. Alcohol is limited by fermentable sugar, not by time and heat alone. In 3 l, 100–120 g added sugar gives a theoretical maximum of about 2.2–2.6% ABV from that sugar alone. A theoretical 8% would require roughly 370 g fermentable sugar, and more in practice. Exact ABV requires original/final gravity or laboratory measurement.

Two weeks at 28°C is no longer the standard quick-kvass process; it is extended alcoholic and acidic fermentation with less predictable results.

Sugar, panela, maltose, and malt

Panela replaces white sugar roughly 1:1. Maltose can ferment but does not replace malt flavor or enzymes. Malt extract is usually more useful than pure maltose for malt character.

Batch state

The AI agent records air and liquid temperatures, peak temperature, direct sunlight, warm exposure time, closure, observations, and alcohol estimate. Unknown values remain `null`.

Safety

Do not tightly seal primary fermentation. Remove the jar from sunlight immediately. Discard for mold, fuzzy growth, colored spots, slime, rotten smell, acetone smell, meat-like smell, or sewage smell.

Resources

- Heat research: `docs/research-fermentation-heat.md`
- Agent instruction: `agent-instructions/kvas-agent.en.md`
- State model: `agent-instructions/state-model.en.md`
- JSON Schema: `agent-instructions/state.schema.json`
- Repository: <https://github.com/bambuchastudent/kvas-ai-agent>