

Machine Hollandaise

Vitamix & Thermomix, one recipe. Clarified butter, acid-first reduction, 70°C pasteurisation hold. Four minutes from pour to pass; four hours of holding stability.

Yield: **250g** (6–8 covers) Active: **4 min** Mise: **15 min** @ 06:00 Target: **70°C** (158°F) Hold: **4 hr** @ 60°C

INGREDIENTS

METRIC · US VOLUME IN RIGHT COLUMN

ACID REDUCTION (YIELDS ~25G)

White wine vinegar	60g	¼ cup
Dry white wine	30g	2 tbsp
Shallot, fine brunoise	25g	1 small
Black peppercorns, cracked	2g	½ tsp
Bay leaf	1g	1 leaf

YOLKS & HYDRATION

Egg yolks (4 large) (RT)	80g	4 yolks
Acid reduction (cooled)	25g	~1½ tbsp
Cold water (do not skip)	15g	1 tbsp
Diamond kosher salt	2g	½ tsp
Cayenne, pinch	0.3g	pinch

CLARIFIED BUTTER

Unsalted butter (whole)	320g	1 cups
Yields clarified (at 70–75°C for the pour)	250g	~1 cups

RATIO LOCK

Yolk : Butter : Acid : Water = **80 : 250 : 25 : 15** · pH locks at 4.2–4.5 (lecithin sweet spot) · 6% added water keeps continuous phase mobile.

Kit: Vitamix or Thermomix · small + medium saucepan · chinois · scale · thermometer · **pre-warmed thermos (1L)** · Cambro / warm bain for butter

METHOD

- Reduction (06:00 mise).** Combine vinegar + wine + shallot + pepper + bay. Reduce on low to ~25g, syrupy. **8–10 min.** Strain through chinois, press shallots, discard solids. Cool to RT.

Pre-acidifying yolks to pH 4.2–4.5 puts lecithin at its emulsification optimum before fat enters. Lemon-at-the-end leaves the build alkaline = weaker emulsion. — Modernist Cuisine Vol. 4
- Clarify butter (06:00 mise).** Melt 320g whole butter, low heat, no stirring, **6–8 min.** Skim foam (caseins). Decant the gold middle layer into a Cambro; leave the milky water at the bottom. Hold at **60°C**. Yield ~250g.

Whole butter is 16% water + 4% milk solids. Free water breaks emulsion under heat & shear. Clarifying takes shelf-life from ~45 min to ~4 hr. — McGee, p. 626
- Pre-warm thermos.** Rinse with boiling water, drain, dry the lip. Cold glass shocks the emulsion at decant.

The Build — Vitamix OR Thermomix, same chemistry

A · VITAMIX

Hot butter does the cooking — one pour, one probe

- Bowl: cold yolks + reduction + cold water + salt + cayenne.
- Heat clarified butter to 95°C** — probe to confirm.
- Pulse **Var 3, 5 sec.**
- Run **Var 4.** Stream 95°C butter through lid hole over **60 sec** — pencil-lead ribbon, never onto the blade.
- Probe: 70–72°C.** Under? +15 sec Var 6. Over 75°C? Butter was too hot — strain.
- Decant immediately into pre-warmed thermos at 60°C.

Yolk proteins coagulate progressively from 65°C. 70°C / 60 sec = 7-log salmonella reduction (regulator-grade) AND firm sauce body. Below 65°C: loose & live. Above 75°C: scrambled. Thermometer non-negotiable. — Baldwin, Practical Guide to Sous Vide Cooking

B · THERMOMIX

Heat + shear in one bowl — pasteurises in place

- Bowl: yolks + reduction + cold water + salt + cayenne.
- 70°C / 4 min / speed 4** — sabayon: thick, pale, ribbons off paddle.
- Still running **70°C / speed 4:** drizzle butter (70–75°C) through lid hole over **90 sec.**
- Probe: 70–72°C, hold 60 sec** at speed 4. This is the pasteurisation step.
- Drop to **65°C / speed 1** for service hold (up to 30 min in bowl).
- Longer hold? Decant to pre-warmed thermos at 60°C.

Done: Sauce reads **70–72°C**, takes a clean whisk-trail, butter-yellow turning pale gold, glossy.
Hold: Pre-warmed thermos at **60°C ± 3°C**, max **4 hr**. Above 65°C: keeps cooking. Below 55°C: butter solidifies, breaks on plating. Refresh thermos at the 90-min mark for long service.

Broken? Crack a fresh yolk + 5g warm water into a clean bowl. Whisk hard. Drizzle the broken sauce in slowly, whisking. **~90% recovery rate.** Faster than starting from scratch.

ELEVATION & VARIATIONS

TIER 1 — THE DAUGHTERS

- Béarnaise** — tarragon-vinegar reduction; chopped tarragon + chervil at finish
- Maltaise** — 60g blood orange juice reduced to 20g, replaces half the acid; orange zest at finish
- Mousseline** — fold 60g whipped cream into 250g sauce at service

TIER 2 — +10 MIN

- Brown butter** — take clarified to noisette before pour
- Torch the cap** — sweep flame 10 cm above plate, 8–12 sec, until gold spots flash. Don't park flame.
- Choron** — 30g tomato paste cooked in butter, whisked in
- Paloise** — mint replaces tarragon in béarnaise

TIER 3 — RESTAURANT

- ★ **N2O siphon (espuma)** — iSi 0.5L + 1 charge, shake 6x, hold 60°C bath. **4–6h service-ready, no skin, no break.** Adrià / Blumenthal move.
- Smoked clarified butter** — 15 min apple/hay before holding
- Bone marrow hollandaise** — 30g warm rendered marrow off-machine
- Yuzu kosho béarnaise** — half acid = yuzu juice + 5g kosho at finish

TROUBLESHOOT

Broken / split	Fresh yolk + 5g warm water. Drizzle broken sauce in. Whisk.
Grainy	Butter was <65°C. Re-warm to 70–75°C, run 15 sec longer.
Scrambled	Butter >80°C or held >72°C. Strain through chinois, salvage flavour.
Too thin	Vitamix: +30 sec Var 6. TM: 70°C / 90 sec / speed 4.
Too thick	Whisk in 5g warm water per 100g sauce.
Tastes flat	Reduction skipped. Whisk 2g lemon + pinch salt.
Breaks on plate	Held <55°C. Pre-warm thermos. Hold 60°C, plate fast.

CHARTER PREP & STORAGE

Build at 06:00	Reduction + clarified butter only. Sauce itself: 4 min at service.
Reduction	1 wk fridge (vinegar preserves)
Clarified butter	6 wk fridge · 6 mo freezer. Re-warm to 60°C.
Pre-portioned yolks	3 d fridge, 4-yolk × 80g pots. RT 30 min before build.
Finished sauce (thermos)	4 hr at 60°C, pre-warmed. Refresh at 90 min.
Finished sauce (siphon)	4–6 hr in iSi at 60°C bath. Sealed = no skin / no break.
Scaling caps	Vitamix ≤500g. TM ≤750g. Above = run 2 batches.