

Roast Lamb Shoulder — Overnight

Twelve hours at 110°C drives connective tissue past 90°C internal — collagen melts, fat renders, fibres pull apart under a fork. Dry brine is half the crackle. The blast at the end, never the start. **Shoulder only — not leg** (leg above 60°C is dry, no recovery; see leg variant in Tier 2).

Yield: **6–8** Active: **30 min** Total: **10–13 hr** Oven: **110°C** → blast **220°C** Internal: **90°C**

INGREDIENTS

METRIC · VOLUME IN RIGHT COLUMN

THE LAMB (A)

Bone-in shoulder, fat cap intact, scored (<i>Welsh / Pyrenean / NZ grass-fed</i>)	2.0–2.4 kg	1
Coarse sea salt (12 g/kg)	25g	4 tsp
Cracked black pepper	5g	2 tsp

THE RUB (B) — POUND TO PASTE

Garlic, grated to paste	30g	8–10
Anchovy, mashed (<i>invisible umami</i>)	20g	×4
Rosemary + thyme chopped	10+5g	—
Lemon zest + Dijon + olive oil + pepper	1 / 15 / 30 / 3g	—

THE BED (C) — UNDER THE RACK

Onions halved + carrots batons + celery	400 / 300 / 200g	—
Garlic head halved + bay + rosemary + peppercorns	1 / 4 / 3 / 5g	—
Dry white wine + lamb/chicken stock	250+500g	~2 cm

SERVICE (D)

Maldon · lemon wedges · parsley + mint chopped	—	—
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Kit: roasting tray with rack · leave-in probe thermometer (alarm 90°C) · oven thermometer (most ovens drift ±15°C at low temp) · mortar/pestle · fat separator · two forks.

METHOD

- Dry brine 12–24 hr ahead.** Pat dry. Score fat cap in 2 cm crosshatch (through fat, not muscle). Massage salt + pepper all over. Set on rack, **uncovered**, in fridge.
 - Salt 24 hr ahead = seasoned through + dry surface (better crackle). The 30-min window is the trap. Either 24 hr or right before. — Nosrat 2017*
- Make the rub.** Pound garlic + anchovy + rosemary + thyme + zest to paste. Stir in oil, mustard, pepper.
 - Anchovy: glutamate + inosinate, umami synergy ~8x. Undetectable as fish; reads as deeper roast. — Ottolenghi 2014*
- Set the bed and rack.** Bed in tray, ~2 cm liquid. Pull shoulder, rub paste all over (into score lines). Rack into tray, fat-cap up. Probe thickest muscle, *away from bone*. Alarm 90°C.
- Overnight: 110°C (230°F).** Centre rack. Close oven door. **Do not open it.** 8–12 hr until probe reads 90°C.
 - Below 95°C internal: collagen never converts. Above 100°C oven: fibres squeeze water faster than collagen converts. 110°C / 90°C is the corridor. — McGee 2004*
- The blast: 220°C, 15–20 min.** Move shoulder to a clean tray (so the bed doesn't scorch). Watch closely — line between mahogany and burned is two minutes. Sprinkle Maldon as it leaves the oven.
 - Maillard at the END, not the start. Browning at start wastes the colour — volatiles evaporate over 10 hours. Browning at end keeps them on the meat.*
- Rest 30 minutes** loosely tented in foil.
- Build the jus.** Strain bed liquid through fine mesh. De-fat (jar the fat — exceptional for roast potatoes). Reduce by 1/3 to 1/2. Season last.
- Pull at the table** with two forks. Bone slides out. Pile on warm plates with jus, parsley, mint, lemon wedge.

Done: Probe reads **90°C** internal in thickest muscle, away from bone. Past 90°C every additional hour pulls texture from “tender” to “spoon-soft.” Bone slides out cleanly, fork meets no resistance. Fat cap mahogany after the blast.

ELEVATION

TIER 1 — NO EXTRA TIME

- Anchovy in rub** — already in base. Don't skip.
- Save the rendered fat** — lamb-fat roast potatoes (separate dinner)
- Garlic confit on side** — the bed's garlic head, after 10 hr, is already confit
- Pickled red onion** — acid + crunch against jammy meat, 30 min

TIER 2 — WORTH IT

- Reverse-sear leg** — 80°C to 50°C internal, blast 240°C 8–12 min
- 7-Hour Provençal** — sealed cocotte with white beans, garlic
- Greek kleftiko** — parchment+foil package, lemon-oregano
- Mechoui spice** — ras-el-hanout + cumin + smoked paprika + smen

TIER 3 — RESTAURANT

- Sous-vide 24 hr at 75°C** — max collagen / min protein loss
- Hay-baked** — smouldering hay in covered Dutch oven
- Pomegranate-molasses lacquer** — last 10 min of blast
- Charcoal-grilled crackle** — finish over hot embers

TROUBLESHOOT

Still tough at 8 hr	Not yet 90°C internal. Keep cooking.
Dry, fibrous	Wrong cut (leg) / past 95°C too long. Pull 90–93°C.
No crackle	Surface wet / oven low. Dry-brine 24 hr; blast 220°C.
Burnt cap, raw inside	Blast at start. Always blast AFTER 90°C internal.
Jus weak / watery	Bed light / not reduced. Reduce by half; cold butter end.
Probe 90°C, meat firm	Probe near bone. Reposition into thickest muscle.
Tastes flat	Salt only at surface. Dry-brine 24 hr next time.

CHARTER PREP & STORAGE

Charter protocol	Cook night before (8–10 hr at 110°C). Refrigerate whole.
Day of, 90 min ahead	130°C, 45 min, until warm through.
Final blast	220°C, 15 min — restores crackle the fridge softened.
Roast in port	Hot stock in moving oven = hazard. Calm only.
Save the fat	Cheesecloth, jar. 1 mo fridge / 6 mo frozen.
Underpowered oven	(< 130°C unavailable) cook 6–7 hr instead.
Leftovers	Pulled in jus — 3 d / 2 mo frozen. Shepherd's pie, ragù, bao.