

Moist Carrot Cake

Macerated + pressed carrot. Toasted-walnut butter distributed through the crumb. Mascarpone-tempered cream cheese frosting that holds at galley temperature.

Yield: **12 portions** (9×13" sheet) Active: **25 min** Total: **1 hr 40 min** Oven: **175°C** (350°F) Done: **95°C** internal

WHERE IT WAS BORN Medieval Europe, where sweet roots stood in for costly sugar — an English “pudding in a Carret root” appears by 1591; revived in WWII Britain under the Ministry of Food’s <i>Dr Carrot</i> .	EATEN, AUTHENTICALLY The ration-table cake: naturally sweetened with carrot when sugar ran short, eaten plain or sugar-dusted as a teacake — no frosting in sight.	HOW IT’S USED NOW An American classic since the 1960s health-food revival; the cream-cheese frosting (Philadelphia, 1965) is its modern signature.
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INGREDIENTS

WEIGHT (LB/OZ) · CUPS / VOLUME IN RIGHT COLUMN

MACERATION

Carrots, peeled, grated	14.1 oz	~5 med
Light brown sugar <i>(for macerating)</i>	1.1 oz	2 tbsp
Fine sea salt <i>(draw moisture)</i>	0.11 oz	½ tsp

DRY

All-purpose flour	9.2 oz	2¼ cups
Baking soda	0.21 oz	1 tsp
Baking powder	0.18 oz	1¼ tsp
Cinnamon, ground	0.18 oz	2 tsp
Ginger, ground	0.11 oz	1 tsp
Nutmeg, fresh-grated	0.04 oz	¼ tsp
Diamond kosher salt	0.18 oz	1 tsp

WET

Light brown sugar	6.7 oz	scant 1 cup
Granulated sugar	3.5 oz	½ cup
Neutral oil <i>(grapeseed/sunflower)</i>	7.1 oz	scant 1 cup
Eggs, large <i>(RT)</i>	5.3 oz	×3
Pure vanilla extract	0.28 oz	1 tsp
Toasted-walnut butter <i>(sub-recipe ↓)</i>	2.1 oz	3 tbsp
Orange zest, microplaned	0.14 oz	1 orange

FROSTING

Cream cheese, full-fat <i>(cold)</i>	12 oz	
Mascarpone <i>(cold)</i>	4.1 oz	½ cup
Unsalted butter, soft <i>(20°C)</i>	3 oz	6 tbsp
Icing sugar, sifted	9.9 oz	2¼ cups
Pure vanilla extract	0.18 oz	1 tsp

Kit: 23×33 cm (9×13") pan · food processor · colander + towel · scale · thermometer · stand mixer · offset spatula · parchment

METHOD

- Macerate carrot.** Toss 400g grated carrot with 30g brown sugar + 3g salt. Colander over bowl. Stand **20 min**.

Osmosis draws ~30% free water out of carrot cells → concentrated flavour, less soggy crumb. — McGee 2004
- Press dry.** Squeeze in clean towel. Target ≤280g pressed carrot. Reserve 40g liquid (optional glaze).

SUB-RECIPE — TOASTED WALNUT BUTTER
Raw walnut halves, 160g · pinch fine salt (optional) · *yields ~70g butter + 80g chopped garnish*
2a. Toast all 160g at **165°C (325°F)**, 10–12 min. Cool 5 min.
3a. Split: **80g → food processor** 3–4 min → smooth butter (~70g). Use 60g in batter; 10g extra keeps 2 wk fridge.
4c. **Remaining 80g:** rough chop for garnish.
5d. *Maillard furaneol + pyrazines in the fat phase → roasted note in every bite.* — López-Alt / Modernist
- Preheat 175°C** (350°F). Butter + parchment 9×13" pan. Whisk all dry together.
- Whisk wet.** 190g brown sugar, 100g granulated, 200g oil, 150g eggs, vanilla, 60g walnut butter, orange zest. 1 min smooth.
- Fold carrot into wet.** 4 folds.
- Add dry in 2 additions.** Half → 6 strokes → second half → fold until just incorporated. Flour streaks fine. Tap pan twice. Bake **28–34 min**.

Soda reacts with brown sugar acidity immediately; powder activates on heat. Sequential lift prevents collapse before crumb sets. — McGee 2004

Done: Internal **95°C** (203°F). Top springs back. Edges pull from pan. Toothpick: moist crumbs only.
Cool: 15 min in pan → wire rack. Frost only at ≤22°C (at least 60 min).

Frosting — mix while cake cools

- 6a.** Paddle **cold cream cheese** 30 sec only. Add cold mascarpone, beat 20 sec.
- 7a.** Add softened butter, beat 60 sec. Sift icing sugar in 2 additions, mix to incorporate only.
- 8c.** Vanilla + pinch salt. Taste. If slack: refrigerate 15 min. *Mascarpone (60–75% fat) buffers frosting stability at 28°C.* — ATK 2021
- 9d.** **Frost:** Offset spatula, 1 cm layer. Scatter toasted walnuts + orange zest. Chill 30 min before slicing.

ONE BATTER, TWO DISHES — SPICED CARROT TEA-LOAF

The frosting-free original. Pour the same batter into **two 900 g (2 lb) loaf tins**, two-thirds full; bake **175°C, 45–55 min** to 95°C internal (foil at 35 min if browning). No frosting — glaze with the reserved carrot liquid + sugar, or leave plain. *Keeps 2–3 days at room temp, no cold chain — the smart passage bake and the crew tier.*

ELEVATION

TIER 1 — NO EXTRA TIME

- Cardamom + white pepper** — 1g + 0.5g in dry
- Miso in frosting** — 10g white miso with butter
- Dark brown sugar swap** — more molasses depth

TIER 2 — WORTH IT (+15 MIN)

- Carrot-liquid glaze** — reduce 40g liquid + 20g sugar, brush warm cake
- Candied ginger** — 50g diced, fold in at end
- Part brown butter** — replace 100g oil with 85g browned

TIER 3 — RESTAURANT

- Dehydrated carrot chips** — mandoline + 65°C / 2 hr, press into frosting
- Pineapple soak** — 40g cold juice, brush warm cake
- Toasted coconut** — 40g golden, press into fresh frosting

TROUBLESHOOT

Dense, wet crumb	Carrot not pressed. Target ≤280g. Squeeze in towel.
Frosting weeps	Cream cheese too warm or over-beaten. Start cold. 30 sec max on CC alone.
Sunk centre	Underbaked. Hit 95°C internal. Lower oven to 165°C if recurring.
Rubbery crumb	Overmixed. Count 12 strokes max after dry goes in.
Frosting too sweet	Add 10g cold cream cheese, mix 10 sec. Or pinch more salt.
Muddy spice	Stale spices. Replace if >6 months old. Freshly grate nutmeg always.

CHARTER PREP & STORAGE

Freeze unfrosted	Always. Cream cheese frosting breaks on thaw.
Naked cake	Cling + foil. 2 mo freezer. Thaw overnight in fridge.
Frosted cake	3 d fridge. Cover loosely — no cling on frosting.
Walnut butter	2 wk fridge, jar. Stir if oil separates.
Pressed carrot	3 d fridge, airtight. Drain before using.
Scaling	×2 = two pans, same time. 8" rounds: 30–35 min. Muffins: 20–24 min.