



Pepper-Crusted Beef Tenderloin Roast

From *America's Test Kitchen* Season 14: Special-Occasion Roasts

WHY THIS RECIPE WORKS:

Rubbing the raw tenderloin with an abrasive mixture of kosher salt, sugar, and baking soda transformed the surface into a magnet for the pepper crust. Cracking the pepper into rough pieces and sifting off any powdery grounds created the crunchiest crust and ideal textural contrast for the juicy tenderloin. In order to tame the heat of so much pepper, we simmered the cracked pieces in oil and strained them before use, replacing some of the complex flavors with orange zest and nutmeg. For a final touch, we serve the pepper-crusted tenderloin with a tangy fruit juice-based sauce.

Serves 10 to 12

Not all pepper mills produce a coarse enough grind for this recipe. For alternative methods for cracking peppercorns, see "Cracking Down on Peppercorns," (related content). Serve with Red Wine-Orange Sauce or Pomegranate-Port Sauce (see related content), if desired.

INGREDIENTS

- 4 1/2** teaspoons kosher salt
- 1 1/2** teaspoons sugar
- 1/4** teaspoon baking soda
- 9** tablespoons olive oil
- 1/2** cup coarsely cracked black peppercorns
- 1** tablespoon finely grated orange zest
- 1/2** teaspoon ground nutmeg
- 1** (6-pound) whole beef tenderloin, trimmed

INSTRUCTIONS

- 1.** Adjust oven rack to middle position and heat oven to 300 degrees. Combine salt, sugar, and baking soda in bowl; set aside. Heat 6 tablespoons oil and peppercorns in small saucepan over low heat until faint bubbles appear. Continue to cook at bare simmer, swirling pan occasionally, until pepper is fragrant, 7 to 10 minutes. Using fine-mesh strainer, drain cooking oil from peppercorns. Discard cooking oil and mix peppercorns with remaining 3 tablespoons oil, orange zest, and nutmeg.
- 2.** Set tenderloin on sheet of plastic wrap. Sprinkle salt mixture evenly over surface of tenderloin and rub into tenderloin until surface is tacky. Tuck tail end of tenderloin under about 6 inches to create more even shape. Rub top and side of tenderloin with peppercorn mixture, pressing to make sure peppercorns adhere. Spray three 12-inch lengths kitchen twine with vegetable oil spray; tie head of tenderloin to maintain even shape, spacing twine at 2-inch intervals.
- 3.** Transfer prepared tenderloin to wire rack set in rimmed baking sheet, keeping tail end tucked under. Roast until thickest part of meat registers about 120 degrees for rare and about 125 degrees for medium-rare (thinner parts of tenderloin will be slightly more done), 60 to 70 minutes. Transfer to carving board and let rest for 30 minutes.

4. Remove twine and slice meat into 1/2-inch-thick slices. Serve.

TECHNIQUE

PREPARING—AND PACKING ON—A PEPPERCORN CRUST

Most peppercorn crusts either bring big crunch or grip the meat—but rarely both. Here's how we got it right.

CRACK: For a crunchy crust that also sticks, coarsely crack—don't pulverize—the peppercorns.



SIFT: To remove the dusty bits of ground pepper, sift the cracked peppercorns in a strainer.



GLUE: Rub the meat with salt, sugar, and baking soda to make the surface tacky.



TECHNIQUE

MANIPULATING PEPPER'S HEAT AND FLAVOR

For a crust that was satisfyingly crunchy, we needed to use so much cracked pepper that its spiciness overwhelmed the mild flavor of the meat. Simmering the peppercorns in oil before applying them to the roast tamed their heat by pulling out an oil-soluble compound known as piperine. Unfortunately, this treatment also dulled the pepper's flavor by drawing out three other oil-soluble compounds—limonene, sabinene, and pinene—that together are largely responsible for creating the citrusy, piney notes that give pepper its depth.

To restore complexity to our lackluster pepper, we scanned databases used by perfumists and flavorists to identify aromatic ingredients that might share those dominant flavor compounds. We zeroed in on two: orange zest (95 percent limonene) and nutmeg (58 percent pinene and sabinene). By adding these ingredients to the oil-simmered peppercorns, we created a crust that was not too spicy, but still full of distinct pepper flavor.

SUBTRACT PIPERINE: To tame the peppercorns' heat, we simmered them in oil, but along with the heat, we lost flavor.



ADD BACK LIMONENE, PINENE, AND SABINENE: By adding nutmeg and orange zest to the crust, we replaced three key flavor compounds lost during simmering.



