Soups / France

Shellfish Bisque Stock

Shrimp, crab, or lobster shells and heads roasted in a hot oven until their carotenoids bloom coral-orange, then deglazed with cognac and tomato and simmered into a scarlet, deeply oceanic essence — the base beneath every true bisque. What you are really extracting is chitin, fat-soluble pigment, and a concentrated oceanic sweetness that no fish stock can replicate.

Time 90 min **Servings** 4

What you'll need.

- [ ] 500 g Shrimp or lobster shells and heads
- [ ] 90 g Shallots, roughly chopped
- [ ] 20 g Garlic cloves, smashed
- [ ] 30 g Tomato paste
- [ ] 60 g Cognac
- [ ] 200 g Dry white wine
- [ ] 1500 g Fish stock or water
- [ ] 10 g Fresh tarragon sprigs
- [ ] 1 piece Bay leaf
- [ ] 30 g Unsalted butter
- [ ] 30 g Olive oil

Let's make it.

01 Preheat the oven to 220°C (425°F). Spread the shells and heads in a single layer on a heavy rimmed baking sheet — do not crowd them, or they steam rather than roast. Drizzle with the olive oil and toss to coat. Roast 15 to 20 minutes, shaking the pan once halfway through, until the shells have turned a vivid coral-orange to brick-red and are fragrant throughout the kitchen. The heads will sizzle and any residual moisture will evaporate. The carotenoid pigments in the shells, which are fat-soluble, are activated by dry heat and will bleed their color and flavor into the fat you cook them in next.

02 Melt the butter in a large heavy pot over high heat until it foams and begins to brown. Add the roasted shells and crush them roughly with the back of a heavy spoon to expose more surface area — this is not optional. Add the shallots and garlic and cook, stirring, for 3 minutes until softened and translucent. Push everything to the side and add the tomato paste, pressing it flat against the hot pot surface (pinçage). Let it cook untouched for 2 minutes, then stir it into the shells — it will turn from scarlet to a deep brick-brown, losing its raw tinned edge and gaining depth and sweetness.

03 Pour the cognac into the hot pot. If using a gas flame, tip the pan to ignite it; on electric, allow it to boil vigorously until the alcohol cooks off (about 30 seconds). Do not flinch from the flambé — it burns off the harsh alcohol and leaves behind the cognac's fruit and vanilla character. Add the white wine and reduce by half over high heat, about 3 to 4 minutes. The wine's acidity will lift any remaining fond from the pot bottom and help extract the remaining soluble compounds from the shells.

04 Add the fish stock, tarragon, and bay leaf and bring to a bare simmer — never a boil, which turns shellfish stock bitter and cloudy. Simmer gently 30 to 40 minutes. Skim the rust-colored foam that rises in the first 10 minutes. The stock is ready when it has reduced by about a quarter and the color is a deep, clear orange-red. Strain through a fine-mesh sieve set over a bowl, pressing the shells firmly to extract every drop. Discard the spent shells. Taste: it should be intensely oceanic, sweet, and full, with no bitterness or sourness. Use as the base for bisque, shellfish sauces, or risotto.

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Servings are an estimate; check quantities in the source recipe.
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