How to Eliminate Litter Box Odor According to the Scientist Who's Studied It for 20 Years

Purina expert, Nathan Huck, breaks down why odor control fails — and how the right litter formula, box setup, and scooping routine solve it for multi-cat households

ST. LOUIS, July 31, 2026 /PRNewswire/ -- Litter box odor is one of the most misunderstood aspects of cat ownership. Nathan Huck is a Director of Innovation at Purina with more than two decades of experience studying cat litter. Most households, he says, are solving for the wrong thing — masking odor rather than eliminating it.

"People assume that if they can smell ammonia, they need a stronger scent," Huck says. "But masking and eliminating are completely different things. The goal is to neutralize ammonia odor before it forms — not to cover it after it's already there."

Ammonia is the primary odor driver in cat urine. Tidy Cats formulas address ammonia through an active blocker technology that prevents it from forming in the first place. When used as directed, the Ammonia Blocker in Tidy Cats litters prevents ammonia odor for 21 days.

The case for going unscented

Huck's go-to recommendation for households with odor concerns is Tidy Cats Free & Clean Unscented.

"Getting unscented litter right is harder than people think," Huck explains. "When you remove fragrance, there's no masking agent. The litter has to work entirely through chemistry — activated charcoal for absorption, ammonia blocker for prevention. If it works without fragrance, it actually works."

Tidy Cats Free & Clean Unscented is fragrance-free and dye-free with activated charcoal that absorbs odors on contact. It forms tight, strong clumps for easy scooping and is 99.9% dust-free. For cats or owners with scent sensitivities, Free & Clean eliminates synthetic fragrance and dyes without sacrificing odor control.

Huck's guidance on scented versus unscented is straightforward: if the cat is comfortable and the household is odor-free, the litter is working. Fragrance should be an optional layer, not the primary odor strategy.

Litter box setup: the science behind the basics

Beyond formula, Huck emphasizes that litter box management is where most households break down. He recommends the following best practices supported by Purina's research and widely aligned with veterinary guidance:

- One litter box per cat, plus one additional. A three-cat household needs a minimum of four boxes.
- Scoop at least once daily. Odor compounds rapidly in used litter, and most cats will avoid a box that doesn't meet their cleanliness standard.
- Fill litter boxes to a depth of 3 to 4 inches. Too shallow limits clump formation; too deep is wasteful and can discourage some cats from using the box comfortably.
- Replace litter and wash the box entirely at least monthly. Odor-causing bacteria embed in the box walls over time, defeating even the most effective litter formula.

Following these guidelines also makes each container of litter more cost-effective — proper depth and

regular scooping extend the useful life of every fill.

"Cat owners do a lot of things right, including buying good litter," Huck says. "But the box setup — the number of boxes, the depth of the litter, the scooping frequency — that's where most odor problems live. Get those right and you've solved most of the problem before the litter even has to work."

Tidy Cats is the brand most often recommended and used by veterinarians, according to a 2024 Forward Group survey (2024 Veterinarian Survey, Forward Group).

For more information, visit purina.com/tidy-cats.

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Over the past five years, Purina has contributed more than $150 million towards organizations that bring, and keep, people and pets together, as well as those that help our communities and environment thrive.

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