

Many pet owners can tell if their furry friend is sick just by looking at them. Maybe they're eating less, or walking slower. Perhaps you're not greeted with their usual enthusiasm when you come home from work.



What if there was a possible diagnosis lurking in your cat's litter? (We're not talking about strange-looking feces...)

[Pretty Litter](#) is a silica-based cat litter that changes colors in response to abnormal pH levels in your kitty's urine.

For instance, blue litter indicates high alkaline, which could point to Feline Lower Urinary Tract Disease (FLUTD), struvite crystal formations, or a host of kidney issues. Orange litter symbolizes the detection of bilirubin, which may imply liver problems like bile duct obstruction (cholestasis), gallstones, liver inflammation, or pancreatitis. Shades of dark yellow and olive green designate normal health.

How It's Made

While many litters are typically clay-based, Pretty Litter's silica absorbs and traps odor while the water in the urine "evaporates, hygienically sealing the urine in the tiny microgels." This way, you don't have to scoop up clumps of liquid—only feces.

"The silica gels are additionally dried and screened, forming the macro-pored silica gel which is used as a highly efficient and clean absorbent," according to the [Pretty Litter FAQ page](#).

[HPLC](#) users know that all too well—hence why silica is the most common stationary phase for column chromatography.

The Science of Color

Chromatography—which literally means "to write with color"—was first used by Italian botanist Mikhail Tsvet in 1900 to separate plant pigments like chlorophyll. Since then, chromatography techniques have been expanded and sophisticated by modern scientists, and color-based technology has found its niche in several applications.

Thermochromism in particular (changing color based on temperature) has been popularly utilized for decades in various merchandise, like mood rings, flat thermometers, and clothing.

Pretty Litter, much like pregnancy tests, react in accordance to biological content. In a disappointing turn of events for preteens everywhere, mood rings do not. (That purple hue doesn't mean your crush will ask you out...You might just have a low-grade fever!)

[>>> See how chromatography helps to ensure the health of our pets](#)

CEO Daniel Rotman created Pretty Litter after the unexpected loss of his beloved cat, Gingi.

"[Feline immunodeficiency virus] was brewing in her," Rotman told *The Oregonian*. "She was

acting fine.”

Though Pretty Litter can provide alerts for possible illnesses, the product is not intended to be diagnostic. Pretty Litter should in no way replace regular veterinary check-ups or professional medical counsel.

Remember: “Cats are sensitive creatures and their health can be affected by normal life events like a change in food, weather, or short-term stress,” according to Pretty Litter. “These circumstances can make [their] way to a cat’s urine, affecting its pH levels.”

If after 24 to 48 hours the color change persists, Pretty Litter recommends taking your cat to the vet.

What other products could benefit from color-changing technology? Diapers? Let us know in the comments!

Related resources:

- [HPLC Silica Safety Data Sheet](#)
- [Barbiturates from Urine by LC/MS/MS](#)
- [Automated, High-throughput Analysis of Benzodiazepines by LC/MS/MS from Urine and Plasma using a Single SPE Procedure \(Poster\)](#)
- [13 Commonly Prescribed Pain Management Drugs from Urine by SPE and LC/MS/MS](#)
- [Steroids from Urine and Plasma by SPE and LC/MS/MS](#)
- [Opiates from Urine by GC/MS and LC/MS/MS](#)
- [41 Pain Management Drugs from Urine by LC/MS/MS](#)
- [Antidepressants and Metabolites from Urine by UHPLC-MS/MS](#)
- [Sudan Dye Contaminants in Spices by HPLC/UV](#)
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