

# SKATOLE

## 3-Methylindole



\$194 / 100g



265 - 266 °C



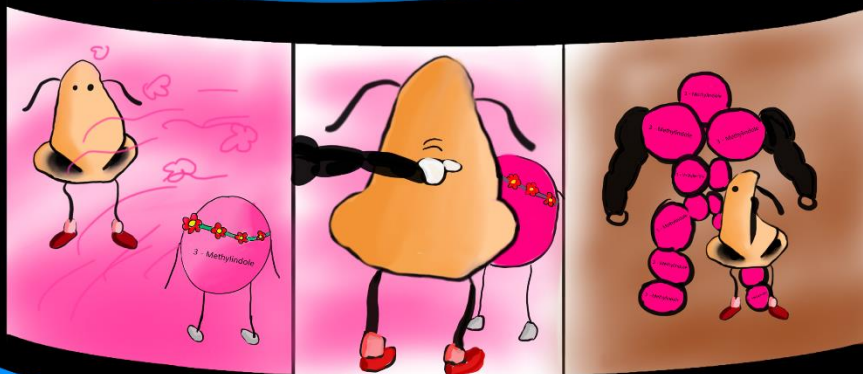
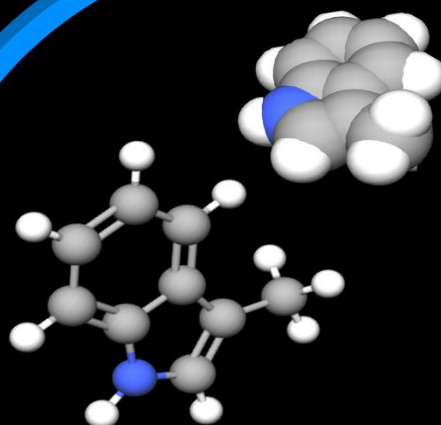
95 - 98 °C



1.654 nD



1.11 g cm<sup>3</sup>



Category 2  
Hazard  
to Aquatic  
Organisms



Can Cause  
Skin, Eye  
and Respiratory  
Irritation When  
Exposed



### What's Skatole Found In?



AND  
FINALLY



## Molecules Around Us Submission Form

- Download form and type in your answers.
- **Save final document as a single .pdf file** and upload to D2L. Marks will be deducted if it is not in .pdf format.
- Your submission form should not be more than two pages long.

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Molecule name: 3-Methylindole

1. Please provide a picture or a link to your representation. If necessary, you can also upload a separate file containing your representation. The more detail, the better. Provide a story or description to go with your picture/link. For example, if someone was looking at your representation what would you want them or need them to know?

The page above shows an infographic of 3-Methylindole or Skatole. The main attraction of this infographic is the cartoon in the center, which I created to highlight the reasoning behind skatole's odd physical property of scent. Skatole can smell like both flowers and feces; an interesting property that is correlated with the concentration of its molecules present. The more molecules there are, the more smell receptors are activated, including those that are responsible for unpleasant scents. Thus, in large concentrations, skatole has a strong stench rather than a flowery aroma. The cartoon illustrates this by depicting a nose that is enjoying the scent of a single pink skatole molecule. I chose the colour pink because it is often associated with a flowery fragrance. Next, the pink scent slowly fades, and the nose is poked from behind. In response, it then turns around to discover a massive intimidating figure, made of skatole molecules, that is excreting an unpleasant stench represented by the brown coloring. The imposing figure composed of skatole molecules highlights how the strength of skatole's odor increases with its concentration, finalizing the explanation for skatole's scent.

3D models of the molecule are available at the top right corner of the page, in both space-filling and ball-and-stick models. The ball-and-stick model shows that the molecule contains a Nitrogen atom, represented by the blue ball, a methyl group on the third carbon of the chain, and a benzene ring typical of indoles. Thus, the IUPAC name for skatole, 3-methylindole is derived. To the left of the space-filling and ball-and-stick models, the quantitative physical properties of skatole are displayed, as well as its cost per 100g. The physical properties include melting point, boiling point, density and refractive index. The bottom left section includes WHMIS hazard symbols of the molecule with brief explanations of those hazards. To the right of them, there are pictures that outline precautions needed to handle the substance and procedures to follow when exposed to skatole. Finally, on the bottom right, there is a section that contains places where skatole can be found. The fact that skatole can be found in ice-cream and feces is the key interesting fact of the infographic and so, it is the last item on the page.

2. Did you encounter any problems while completing your representation?

Representing a description and an explanation of skatole's unique property of smell, which intrigued me enough to select it as my molecule, proved to be quite challenging. I already had a lack of space to create an explanation of how the molecule smells at different concentrations, but I also had to do so in an interesting manner. Infographics are meant to be visual aids, not paragraph explanations so I decided to create an illustration. However, creating a visual representation of smell was extremely challenging. I went through several revisions and ideas, like using pictures of places you may find skatole: flowers and foods for example. However, those pictures were too vague to be the sole source of explanation. Finally, I decided to represent the differences in smell at different concentrations with a picture of a massive figure composed of skatole molecules. This figure would illuminate how at greater concentrations, the scent is much stronger and thus, the smell is less pleasant. Therefore, the cartoon would then represent a simple explanation for why skatole acquires a stench in large concentrations. Another problem I ran into when creating the infographic was the use of space. There were many versions of this infographic with completely different arrangements. It proved difficult to display the different properties of the molecule in a manner which did not feel clustered or empty.

## References

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