

Vinegar Syndrome: What is it and why should I care?



Before and after images of a cel affected by Vinegar syndrome. This cel is from She-Ra: Princess of Power (1980s).

Vinegar Syndrome is something every animation art collector should be aware of. It is a condition where the cellulose nitrate/acetate the cels are made of begins to break down, releasing fumes with the distinct smell of vinegar.

Unfortunately, animation cels were not made to last. Many studios would discard cels once production was complete, or wash the paint off of them so the cels could be reused. They only needed to last enough to be filmed, were never meant to be archived, and are not chemically stable. However, with proper care it is possible to prolong the lifespan of animation cels.

SIGNS OF VINEGAR SYNDROME / CEL DETERIORATION

- Vinegar smell (it can be faint or very strong)
- Warping/rippling of the acetate surface
- An "oily" liquid, usually present between cel layers
- Grainy/salt crystal like deposits on the cel.

It is very important to note that **Vinegar Syndrome is CONTAGIOUS**. Affected cels will release acidic fumes which may cause nearby cels to also begin to deteriorate. Any cels showing signs of Vinegar Syndrome should be immediately isolated from other cels. Ideally Vinegar Syndrome

affected cels should be placed as far away from healthy cels as possible. Unfortunately, it is not currently known how to stop Vinegar Syndrome once it sets in.

[earlysignsofvs_rippling.jpg](#)

[earlysignsofvs_rippling_closeup.jpg](#)

This cel shows early signs of Vinegar Syndrome. It has minor warping/rippling in the marked areas and a faint vinegar smell. The second image shows a close up of the ripples. A cel in the beginning stages of Vinegar Syndrome should immediately be aired out and separated from the rest of the collection.



Examples of cel warping/rippling, indicative of vinegar syndrome.



Examples of Vinegar Syndrome cels exhibiting grainy/crystal-like deposits. It is not known how to stop or remove this type of damage once it has occurred.



Examples of cels with severe vinegar syndrome damage.

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