

## Re: Yellow/green color of acetone and MEK

**Source:** <http://sci.tech-archive.net/Archive/sci.chem/2004-11/1064.html>

---

**From:** Muhammad ([muhammad\\_at\\_hotmail.com](mailto:muhammad_at_hotmail.com))

**Date:** 11/20/04

Date: 19 Nov 2004 17:46:45 -0800

Ketones should be stable if pure. Acids (and bases) catalyse dimerisation. The first step (aldol reaction) is reversible and strongly shifted towards starting material, the second step (water elimination) is irreversible and is catalysed by acids also. The formed 3-methyl-2-butene (mesitylen oxide) is yellow.

This is my best guess.

"Wilco Oelen" <[photo@woelen.nl](mailto:photo@woelen.nl)> wrote in message  
news:<1100893923.196527.60970@z14g2000cwz.googlegroups.com>...

> Hello,

>

> *I have some acetone, stored in a transparent colorless glass bottle in  
> a dark cabinet. The acetone has turned light yellow/green within  
> approximately one year of storage. When I purchased the acetone it was  
> completely colorless.*

> *Before I did the acetone in the bottle, it was cleaned very well with  
> hot water, then rinsed with distilled water, allowed to (almost)  
> completely dry and finally rinsed two times with a small amount of  
> acetone.*

>

> *A similar, even stronger, observation I have made with MEK (methyl  
> ethyl ketone). I separated 100 ml of this and poured this in a small  
> glass bottle. This MEK also has turned yellow/green in just a few  
> months of storage. The remaining MEK in the original bottle still is  
> colorless. The MEK also is stored in a dark cabinet. The bottles, in  
> which the MEK is stored are cleaned in a similar way as the acetone  
> bottle, but now with two final rinses with MEK.*

>

> *Any idea what the source of the color is? Are ketones not stable on  
> storage?*

>

> Wilco Oelen