

Reclassification of Imidazole

The European Chemicals Agency (ECHA) has changed the classification of one of the main components of the Karl Fischer reagents.

After the end of the transitional phase (till 2015), Karl Fischer reagents containing imidazole must be labelled with the following pictogram and warning.

GHS08 (health risk)
H360D (may harm the unborn child)



How dangerous are Karl Fischer reagents containing imidazole?

Imidazole has not become more dangerous. There has also been no change in the composition of the Karl Fischer reagents.

Nevertheless, a new study has shown that an intake of 180 mg per kg per day can harm the unborn child.

How much imidazole is contained in a bottle of Karl Fischer reagent?

A person weighing 60 kg would have to consume ca. 10 g imidazole by mouth daily. Depending on the reagent, this corresponds to about 100 mL to 1'000 mL.

And how much in a titration vessel?

There is normally between 30 and 150 mL reagent in a Karl Fischer titration vessel. This means that the user would have to drink the contents of a whole titration vessel to reach the critical level for imidazole

How can contact with Karl Fischer reagents be avoided?

Metrohm Karl Fischer titrators offer a variety of technical functions which prevent direct contact with the Karl Fischer reagents, thus ensuring safety at work.

- **Automatic reagent change:** The titration vessel can be emptied and refilled with fresh reagent by using the Dosino and the dosage unit. It is not necessary to open the titration vessel.
- **Ti stand with integrated pump:** With the 803 stand, you can exchange the reagents with a single touch of a button.
- **Overflow protection:** The overflow protection 6.1623.000 prevents overflow from the waste bottle.
- **Stop volume during conditioning:** Conditioning is broken off after addition of a defined volume, even with very «wet» solvents. There can be no overflow from the titration vessel.

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