



NEXTGEN

**SAFER WATER  
DETERMINATION**

**NEW!**

**FREE OF IMIDAZOLE (FI)  
HYDRANAL REAGENTS**

**Honeywell**

## We are committed to provide the next level of safety and offer reagents free from CMR (carcinogenic, mutagenic and reprotoxic) substances.

In 1979, Eugen Scholz and Helga Hoffmann invented Hydranal™ reagents by replacing noxious pyridine, originally used as a base for Karl Fischer (KF) titration, with odorless imidazole. Next in 1998, Hydranal introduced ethanol-based reagents (Hydranal E-types) for those looking to move away from toxic methanol. Now, we are committed to provide the next level of safety and offer reagents free from CMR (carcinogenic, mutagenic and reprotoxic) substances.

In 2015, the European Commission classified imidazole as a CMR substance and added H360D statement (“may damage the unborn child”). The initial trigger for the evaluation was the usage of imidazole in the food industry and therefore an intended oral intake. Although KF reagents contain imidazole only in dissolved and diluted form, are always handled in closed systems in small analytical amounts, and direct contact with imidazole is unlikely, professional users of CMR substances must carry out a risk assessment considering the whole work process.

So far, alternatives to imidazole have adversely impacted the performance of KF reagents and users have had limited options to move away from any potential CMR risk. **Now, after dedicated research, the Hydranal Center of Excellence has developed new reagents that are free of imidazole and do not compromise on performance** (see Fig. 1).

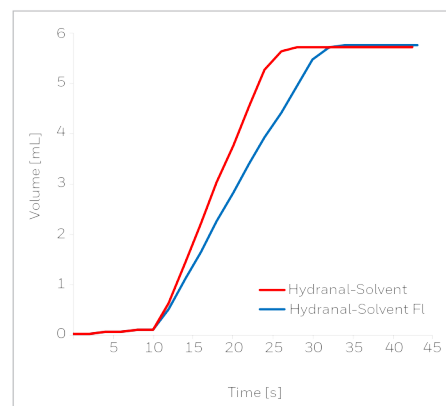


Fig. 1. Performance comparison between Hydranal-Solvent FI (free of imidazole) and Hydranal-Solvent (with imidazole). Titration of 30 mg of water.

### New Hydranal FI-type reagents:

- Free of imidazole
- No CMR classification
- Same high performance
- Same high accuracy

Your safety is the highest priority for Hydranal, without comprising on results.

PRODUCT NUMBER	PRODUCT NAME	DESCRIPTION	PACKAGING
34432	HYDRANAL NEXTGEN Solvent FI	Medium for volumetric two-component Karl Fischer titration (methanol-based), free of imidazole (free of CMR substances)	1 L
34431	HYDRANAL NEXTGEN Solvent E-FI	Medium for volumetric two-component Karl Fischer titration (ethanol-based), free of imidazole (free of CMR substances)	1 L
34433	HYDRANAL NEXTGEN Coulomat AG-FI	Anolyte suitable for cells with and without diaphragm, free of imidazole (free of CMR substances)	500 mL

### To order, please contact:



### For more information, visit:

hydranal-honeywell.com

### Hydranal Center of Excellence

Tel. +49 5137 999 353

Fax: +49 5137 999 698

hydranal@honeywell.com

All statements and information provided herein are believed to be accurate and reliable, but are presented without guarantee, warranty or responsibility of any kind, express or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated herein, or that other measures may not be required. User assumes all liability for use of the information and results obtained. Free of Imidazole (free of CMR substances)



**RESPONSIBLE CARE**  
OUR COMMITMENT TO SUSTAINABILITY

6002 | AM | 04/20  
© 2020 Honeywell International Inc.

**Honeywell**

