



# SAFER WATER DETERMINATION

# NETW! FREE OF IMIDAZOLE (FI) HYDRANAL REAGENTS



## 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).

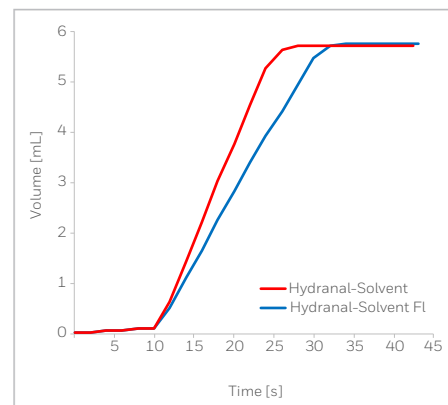


Fig. 1. Performance comparison between Hydranal-Solvent FI (free of imidazole) and Hydranal-Solvent (with imidazole). Titration of 30 mg of water.

### 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



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Find out more at [eu.fishersci.com](http://eu.fishersci.com)

Austria: +43(0)800-20 88 40 Belgium: +32 (0)56 260 260 Denmark: +45 70 27 99 20  
Germany: +49 (0)2304 9325 Ireland: +353 (0)1 885 5854 Italy: +39 02 950 59 478  
Finland: +358 (0)9 8027 6280 France: +33 (0)3 88 67 14 14 Netherlands: +31 (0)20 487 70 00  
Norway: +47 22 95 59 59 Portugal: +351 21 425 33 50 Spain: +34 902 239 303  
Sweden: +46 31 352 32 00 Switzerland: +41 (0)56 618 41 11 UK: +44 (0)1509 555 500

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