

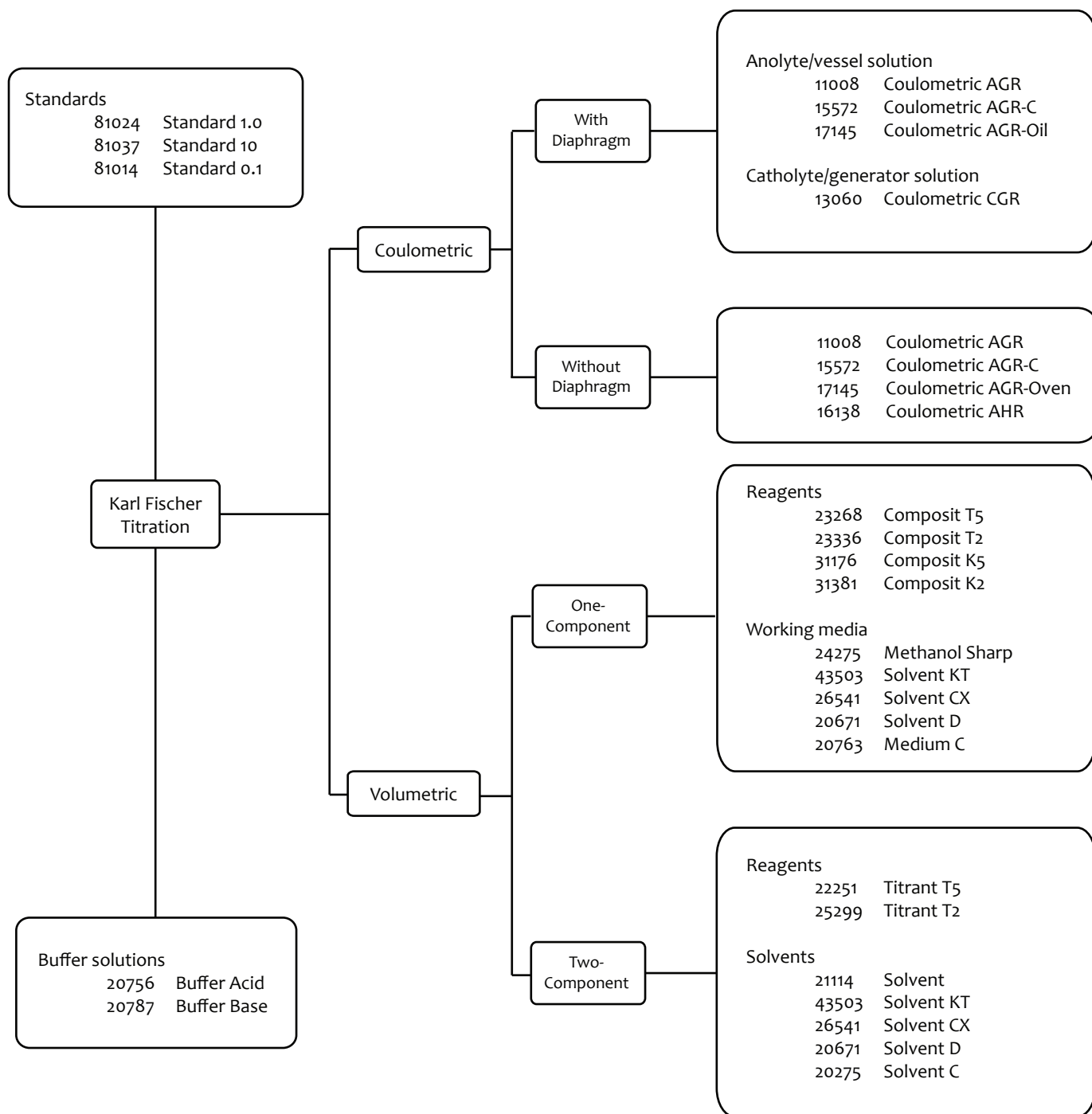


# WaveTrace<sup>TM</sup> Karl Fischer reagents

Achieve the best results in your moisture analysis

Your premier source for precise and innovative Karl Fischer technology

# WaveTrace™ Karl Fischer titration products



# WaveTrace™ Coulometric reagents

Reagents for coulometric Karl Fischer titration support general applications and special cases including petrochemicals, fuels, fats and oils.

All reagents are formulated for high performance with low drift and high analysis capacity.

In particular, Coulometric AHR reagent is used for difficult to dissolve oil samples and produces accurate results in cells both with and without a diaphragm.

- **Current efficiency** - All coulometric reagents are optimized for low electrical resistance
- **Reliable titration end points** - Ensure high accuracy and reproducibility of measurements
- **Universally formulated anolyte reagent** suitable for cells with or without a diaphragm

Product Name	Product Number	Packaging	Description
<b>Coulometric Karl Fischer titration with a diaphragm</b>			
WaveTrace™ Coulometric AGR Karl Fischer reagent	11008-1L	1 L	Anolyte (vessel) solution for general purpose coulometric titration
	11008-6X1L	Case of six 1 L	
	11008-500ML	500 ml	
	11008-6X500ML	Case of six 500 ml	
WaveTrace Coulometric AGR-C Karl Fischer reagent	15572-1L	1 L	Anolyte (vessel) solution for titration of samples with poor solubility in methanol (fuels, organic chemicals, oils)
	15572-6X1L	Case of six 1 L	
	15572-500ML	500 ml	
	15572-6X500ML	Case of six 500 ml	
WaveTrace Coulometric AGR-Oil Karl Fischer reagent	17145-1L	1 L	Anolyte (vessel) solution for titration of samples of crude oil and petrochemicals
	17145-6X1L	Case of six 1 L	
	17145-1L	500 ml	
	17145-6X1L	Case of six 500 ml	
WaveTrace Coulometric CGR, catholyte	13060-110ML	110 ml	Universal catholyte (generator) solution
	13060-6X110ML	Case of six 110 ml	

<b>Coulometric Karl Fischer titration without a diaphragm</b>			
WaveTrace™ Coulometric AGR Karl Fischer reagent	11008-1L	1 L	Anolyte (vessel) solution for general purpose coulometric titration
	11008-6X1L	Case of six 1 L	
	11008-500ML	500 ml	
	11008-6X500ML	Case of six 500 ml	
WaveTrace Coulometric AGR-C Karl Fischer reagent	15572-1L	1 L	Anolyte (vessel) solution for titration of samples with poor solubility in methanol (fuels and organic chemicals)
	15572-6X1L	Case of six 1 L	
	15572-500ML	500 ml	
	15572-6X500ML	Case of six 500 ml	
WaveTrace Coulometric AGR-Oven Karl Fischer reagent	18411-1L	1 L	Anolyte (vessel) solution for titration with an oven
	18411-6X1L	Case of six 1 L	
	18411-1L	500 ml	
	18411-6X1L	Case of six 500 ml	
WaveTrace Coulometric AHR Karl Fischer reagent	16138-1L	1 L	Anolyte (vessel) solution for titration of fats, oils and biofuels (can be used in cells with or without diaphragm)
	16138-6X1L	Case of six 1 L	
	16138-500ML	500 ml	
	16138-6X500ML	Case of six 500 ml	



## WaveTrace™ Volumetric reagents

Volumetric method of titration is normally used for moisture content at levels between 0.1 and 100%. Vela Chemical offers a full range of volumetric Karl Fischer reagents for one-component and two-component titration. WaveTrace formulations ensure fast reaction rates, broad chemical compatibility and sharp titration endpoints.

Solvent D is currently the best available working medium for titration of biofuels, fats and oils. It significantly reduces titration time and improves accuracy of analysis.

- **Methanol Sharp** - Combination of Composit reagents and Methanol Sharp working medium produces exceptionally sharp titration endpoints and improves accuracy of analysis
- **Ketone titration** - Two-component volumetric reagents for ketone titration are formulated to minimize water-generating side reactions and make analysis less time-sensitive and more accurate.

Product Name	Product Number	Packaging	Description
One-component Karl Fischer titration			
WaveTrace™ Composit T5 Karl Fischer reagent, 5 mg/ml	23268-1L	1 L	General purpose reagent for volumetric titration
	23268-6X1L	Case of six 1 L	
WaveTrace Composit T2 Karl Fischer reagent, 2 mg/ml	23336-1L	1 L	General purpose reagent for volumetric titration
	23336-6X1L	Case of six 1 L	
WaveTrace Methanol Sharp	24275-1L	1 L	Working medium for one-component titration
	24275-6X1L	Case of six 1 L	
WaveTrace Medium C	20763-1L	1 L	Working medium for fuels and petrochemicals (contains chloroform)
	20763-6X1L	Case of six 1 L	
WaveTrace Composit K5 Karl Fischer reagent, 5 mg/ml	31176-1L	1 L	Reagent for one-component volumetric titration of aldehydes and ketones
	31176-6X1L	Case of six 1 L	
WaveTrace Composit K2 Karl Fischer reagent, 2 mg/ml	31381-1L	1 L	Reagent for one-component volumetric titration of aldehydes and ketones
	31381-6X1L	Case of six 1 L	

Two-component Karl Fischer titration			
WaveTrace Titrant T5 Karl Fischer reagent, 5 mg/ml	22251-1L	1 L	General purpose titrant for two-component titration
	22251-6X1L	Case of six 1 L	
WaveTrace Titrant T2 Karl Fischer reagent, 2 mg/ml	25299-1L	1 L	General purpose titrant for two-component titration
	25299-6X1L	Case of six 1 L	
WaveTrace Solvent	21114-1L	1 L	Solvent for two-component titration
	21114-6X1L	Case of six 1 L	

Specialized solvents for one- and two-component titration			
WaveTrace Solvent CX	26541-1L	1 L	Solvent for titration of crude oil, petrochemicals and fuels
	26541-6X1L	Case of six 1 L	
WaveTrace Solvent D	20671-1L	1 L	Solvent for titration of fats, oils and biofuels
	20671-6X1L	Case of six 1 L	
WaveTrace Solvent C	20275-1L	1 L	Solvent for fuels and petrochemicals (contains chloroform)
	20275-6X1L	Case of six 1 L	
WaveTrace Solvent KT	43503-1L	1 L	Solvent/working medium for aldehydes and ketones
	43503-6X1L	Case of six 1 L	



## WaveTrace™ Standards and Buffers

Standards are a critical part of the Karl Fischer analysis workflow. They assure accuracy and reproducibility of titration regardless of the type of analysis.

WaveTrace™ standards are produced as liquid solutions packaged in ampules with a predetermined water content of 1% (10 mg/g), 0.1% (1 mg/g) and 0.01% (0.1 mg/g)

- **Traceability** - All WaveTrace standards are traced to Standard Reference Materials (SRM 2890)
- **Chemical compatibility** - Water standards are based on solvents with low reactivity compatible with most materials including aldehydes, ketones and esters
- **Buffers** are formulated for optimal Karl Fischer reaction rates and reproducibly accurate results regardless of the acidic or basic nature of the sample. They are compatible with both coulometric and volumetric methods of titration

Product Name	Product Number	Packaging	Description
Liquid water standards			
WaveTrace™ Water Standard 1 mg/g	81024-40ML	10x 4 ml	Standard solution with water content 1 mg/g (0.1%)
	81024-6X40ML	60x 4 ml	
WaveTrace Water Standard 10 mg/g	81037-40ML	10x 4 ml	Standard solution with water content 10 mg/g (1%)
	81037-6X40ML	60x 4 ml	
WaveTrace Water Standard 0.1 mg/g	81014-40ML	10x 4 ml	Standard solution with water content 0.1 mg/g (0.01%)
	81014-6X40ML	60x 4 ml	

Buffers			
WaveTrace™ Buffer Acid	20756-1L	1 L	Buffer solution for titration of strong acids
	20756-6X1L	Case of six 1 L	
WaveTrace Buffer Base	20787-1L	1 L	Buffer solution for titration of strong bases
	20787-6X1L	Case of six 1 L	



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