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PRODUCT SPOTLIGHT

Thermo Scientific Qtegra Intelligent Scientific Data Solution Software

Integrated autodilution solutions for ICP-OES and ICP-MS

The Thermo Scientific™ Qtegra™ Intelligent Scientific Data Solution™ (ISDS) Software provides laboratories with the tools to fully integrate third party autodilution accessories, increasing productivity and reducing laboratory costs.

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Autodilution offers a number of features for laboratories wanting to increase productivity and perform multi-element quantification in a variety of complex sample matrices:

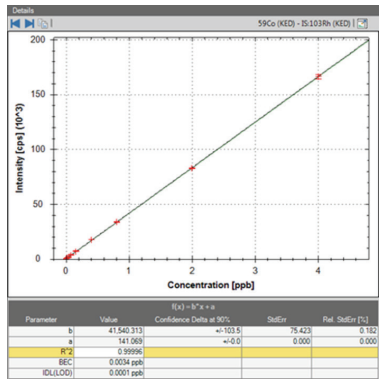
- Automatically create a calibration curve from a single stock standard.
- User defined prescriptive dilution of samples.
- Intelligent autodilution of over range analyte concentrations.
- Intelligent autodilution of high matrix samples.

Prescriptive dilution removes the need for manual dilution of samples. The flexibility in dilution range means that calibrations can be prepared from stock standards or samples can be diluted at user defined factors. Automating the dilution delivers several advantages, such as:

- Significant saving on operator time as manual off-line dilutions are eliminated.
- Reducing risk of error arising from manual manipulation of samples.
- Reducing contamination from labware and pipetting.
- Economizing labware such as pipettes and vials.

Intelligent dilution is ideal for samples that either do not fall within the calibration range or have higher matrix content than the standards. Traditionally, these samples would only be discovered after the run is complete and the data has been processed. The operator would then have to manually find the sample vial, dilute it and then re-run it, which also means the calibration needs repeating. Autodilution systems mitigate this problem by actively diluting samples during the analytical run.

	Label	Sample Type	Standard	Rack	Vial	prepFAST DF
1	Blank	AVERAGE BLK			1	1
2	Blank	AVERAGE BLK			1	1
3	Blank	AVERAGE BLK			1	1
4	0.010 ppb	STD	4 ppb Stock		2	400
5	0.013 ppb	STD	4 ppb Stock		2	300
6	0.020 ppb	STD	4 ppb Stock		2	200
7	0.040 ppb	STD	4 ppb Stock		2	100
8	0.080 ppb	STD	4 ppb Stock		2	50
9	0.160 ppb	STD	4 ppb Stock		2	25
10	0.4 ppb	STD	4 ppb Stock		2	10
11	0.8 ppb	STD	4 ppb Stock		2	5
12	2 ppb	STD	4 ppb Stock		2	2
13	4 ppb	STD	4 ppb Stock		2	1



Creating a calibration curve from a single stock standard.

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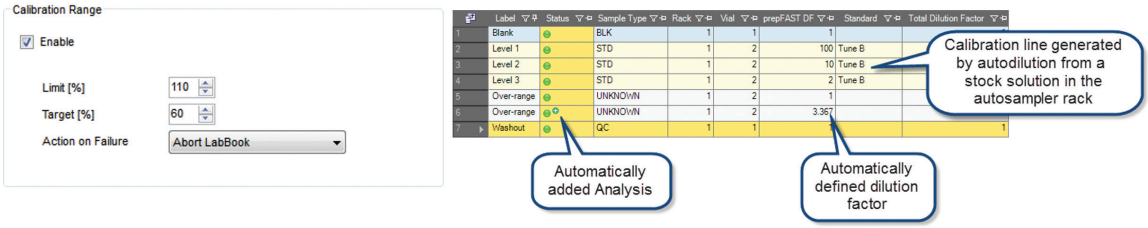
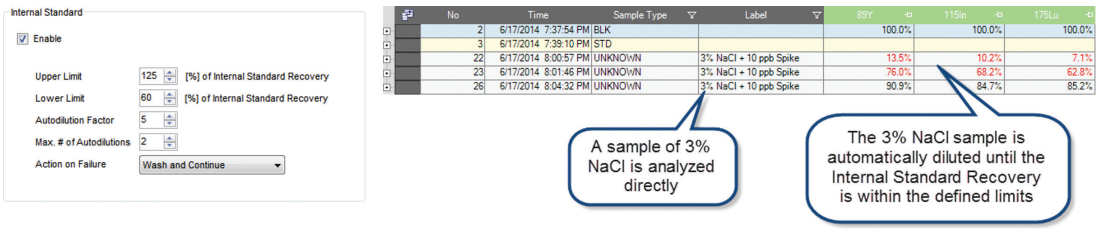


Intelligent autodilution - automatically inserted dilution when a sample is over a user-specified upper limit.



Intelligent autodilution - automatically inserted dilution when a sample is outside a user-specified Internal Standard recovery limit.

The Qtegra ISDS Software fully integrates autodilution systems into the workflow so that samples are appropriately diluted and re-analyzed without operator intervention and without waiting until the end of the sample list. Third party plugins allow the user to control all aspects of the autodilution systems to suit the application requirements.

- Maximize throughput by minimizing post-run re-analysis.
- Ensure valid data by correcting for matrix suppression and over-range samples.
- Optimize productivity and free up valuable operator time with automation of sample dilution, calibration preparation and intelligent on-line dilution.
- Reduce costs and waste with lower consumption of labware, water and chemical reagents.

Find out more at **thermofisher.com/Qtegra-ISDS**

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