Will an Autodilutor Improve Your Bottom Line?

Agilent

Trusted Answers

Saving time and money with automation

The tasks listed below are typically automated by the autodilutor. If your lab is performing them manually now then this time can be put to better use, such as spending more time receiving samples, reporting results and helping customers.

Task	Average weekly time consumed	
1. Preparing calibration standards from a stock solution		hours
2. Re-preparing calibration standards and recalibrating ICP to correct mistakes		hours
3. Diluting, mixing and transferring samples between tubes prior to analysis		hours
4. Reviewing data to determine samples that need remeasurement and then finding and preparing those samples		hours
5. Time spent re-measuring standards, samples and QC solutions		hours
6. Time spent washing labware		hours
Time that could be saved	0.00	**hours**

Costs that can be avoided or reduced

Many of these items are low cost but used in high volumes. They can really add up if you have high sample loads. Don't forget the cost of waste management. You may need to check with your property management department to determine the costs of disposing of waste.

Item	Weekly cost
1. Purchase cost of pipette tips	
2. Purchase of sample tubes	
Standard grade, metal-free tubes	
High grade, metal-free tubes	
3. Purchase of disposable gloves used for sample preparation	
4. Disposal of plastic waste (if known)	
Total weekly cost	$ 0.00

Reducing environmental impact with autodilution

The automation of manual tasks with the ICP workflow automation systems

- **Increases Productivity**
- **Reduces Energy Consumption**
- **Reduces Waste** of single-use plastic including:
  - Pipette Tips
  - Standard and Sample Vials
  - Gloves

The Agilent ICP Workflow Automation System will **reduce the environmental impact** of analysis, helping labs to become **more sustainable**.

Item	Daily amount
Number of samples	
Number of manual dilutions made before analysis	
Number of manual dilutions made after analysis (rework)	
Number of pairs of gloves used	
Number of ICP operating days per year	
Annual waste plastic produced for ICP analyses	0.00 kg
ADS 2 autodilutor annual waste plastic produced	0.00 kg
Estimated reduction in waste plastic produced annually by using the ADS 2 autodilutor	0.00 kg

Incremental profit opportunities and other benefits

- The Agilent ICP Automation system includes an AVS switching valve that may reduce argon consumption by up to 50%, by doubling your sample throughput. This will reduce the cost of analysis per sample.
- By automating the re-measurement of over range samples the time taken to deliver results to customers will be reduced, particularly for samples that are run unattended. This may allow you to confidently charge for quick-turnaround results.
- You may be able to increase your sample capacity by automating your ICP analyses and run more revenue-generating samples per batch.
- Repetitive lab tasks can cause occupational health problems, such as muscle strains from using pipettes. There's also the frequent handling of acidic solutions which can be significantly reduced. If your lab personnel have to take time off or you have trouble retaining them due to sample preparation tasks, that's a cost to the lab that could be eliminated through automation.
- You can reduce the risk of sample contamination with less sample handling by analysts, less exposure to the open environment, and less contact with tubes and pipettes.
- Improve job satisfaction and increase the value your lab operators are able to contribute by freeing them from labour-intensive sample preparation steps.

Talk to your local Agilent representative for pricing on the Advanced Dilution System. They will be able to determine the components you need to have a complete automation solution and what the cost will be so you can calculate the return-on-investment.

Download a spreadsheet to calculate the money you'll save by using an autodilutor. >

Learn more:
explore.agilent.com/icp-automation

Get answers to your technical questions and access resources in the Agilent Community:
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