




Agilent 7696A WorkBench Cost Benefit Calculator

User's Guide

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Change any highlighted value.
Place mouse over blue icons for guidance.



	Manual Sample Prep Costs	WorkBench Sample Prep Costs	Total Savings
Labor rate \$ per hour	\$ <input style="background-color: #e0e0e0;" type="text" value="55"/>	\$ 55	
Samples per week	<input style="background-color: #e0e0e0;" type="text" value="400"/>	400	
Samples per year	20,000	20,000	
WorkBench purchase price		\$ 25,000	
Glassware (disposable or cleaning) WorkBench uses no glassware – only standard 2mL vials			
Avg. cost of glassware	\$ <input style="background-color: #e0e0e0;" type="text" value="2.50"/>	\$ 0.50	
No. glassware per sample	<input style="background-color: #e0e0e0;" type="text" value="2"/>	2	
Cost per sample	\$ 5.00	\$ 1.00	
Cost per week	\$ 2,000	\$ 400	
Cost per year	\$ 100,000	\$ 20,000	
Solvents & reagents WorkBench uses ~10X less solvent and reagents			
Avg. cost per sample	\$ <input style="background-color: #e0e0e0;" type="text" value="2.50"/>	\$ 0.25	
Cost per week	\$ 1,000	\$ 100	
Cost per year	\$ 50,000	\$ 5,000	
Labor cost WorkBench requires <1/3 the labor of manual techniques			
Time (minutes) per sample	<input style="background-color: #e0e0e0;" type="text" value="4"/>	1	
Cost per sample	\$ 4	\$ 1	
Cost per week	\$ 1,600	\$ 400	
Cost per year	\$ 80,000	\$ 20,000	
Solvent waste disposal WorkBench uses ~10X less solvent and reagents			
Cost per week	\$ <input style="background-color: #e0e0e0;" type="text" value="560"/>	\$ 5.60	
Automation percentage	% <input style="background-color: #e0e0e0;" type="text" value="10"/>	% 100	
Cost per month	\$ 224	\$ 22	
Cost per year	\$ 2,800	\$ 280	
Repeat analysis due to sample prep WorkBench is much more reproducible than manual techniques (4X)			
Batches re-run per week	<input style="background-color: #e0e0e0;" type="text" value="0.5"/>	0.1	
Avg. no. samples per batch	<input style="background-color: #e0e0e0;" type="text" value="20"/>	20	
Cost of rework per week	\$ 120	\$ 4	\$ 116
Cost of rework per year	\$ 6,000	\$ 200	\$ 5,800
TOTAL cost per batch	\$ 12	\$ 2	\$ 10
TOTAL cost per week	\$ 5,280	\$ 1,410	\$ 3,866
TOTAL cost per year	\$ 238,800	\$ 70,000 - \$	\$ 173,900

*Includes suggested U.S. WorkBench purchase price of approx. \$25,000

This guide will help you to generate the best data from the Cost Benefit Calculator. Here are a few things to help you use the Calculator:

1. Fill in the highlighted boxes with values from your own lab that describe prep that you currently do manually. (The provided default values are for demonstration purposes only.)
2. Exact values are not needed – approximate numbers are adequate for our comparison.
3. If you require more information to properly fill in the highlighted boxes, place your mouse over the blue icon.
4. If you do not have the numbers available to fill in a section, enter **0** and that section will be skipped in the calculations.
5. For the comparison between manual prep and automation on the Agilent 7696A WorkBench, we show what assumptions (numerical) we use for the calculations in the heading for each section.
6. As you fill in each highlighted box, you can click the **Update Graph** button to see the effect of the new value.
7. Click the **Update Graph** button, to see the TOTAL cost per week and year updated at the bottom of the screen. The graphical representation of your calculated values to the right of the screen is also updated.



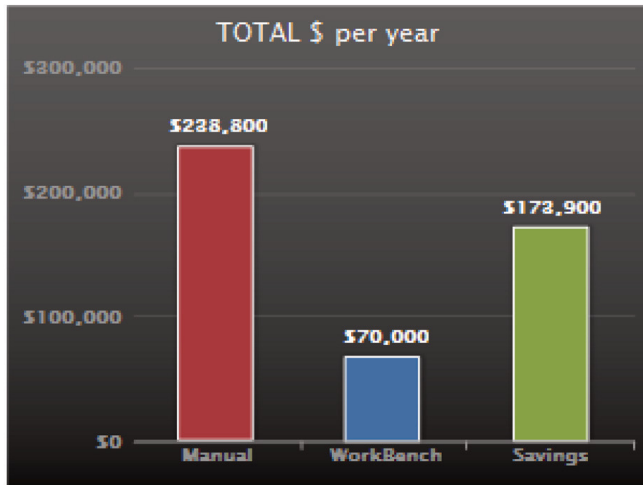
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Determine your potential savings:

Change any field highlighted in grey under "Manual Sample Prep Costs" in the left column. Totals at the bottom-left will update each time a number is changed. Click on the button below to graph your results.

Update Graphs



The right half of the Calculator screen displays a graphical representation of your calculated values:

Top Bar Graph

1. The Red bar shows the calculated yearly cost of doing your prep manually based on the values you supplied in the highlighted boxes.
2. The Blue bar shows the result of the calculations performed based on the automation assumptions to determine the cost of doing the same prep on the Agilent 7696A WorkBench.
3. The Green bar shows the difference between the manual prep and WorkBench prep calculations – which represents your potential savings per year.

Bottom Graph - Savings versus Time

1. The value for the calculated potential savings per year from the "Total \$ per year" graph is spread across 12 months.
2. The approximate cost of the Agilent 7696A WorkBench (US List) is shown on the y-axis as the break-even point at which you recoup the cost of the automation investment.
3. Based on your Saving per year value, the intersection of the two lines shows how long in months it will take to recoup the investment cost of the Agilent 7696A WorkBench.

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