Cost Benefit Analysis

Thomson Ultra Yield™ Flask [patented]

Cost Benefit Analysis on the Thomson Ultra Yield™ Flask compared to a standard Glass/Erlenmeyer Flask. The table below shows the cost of one (1) Ultra Yield™ Flask compared to one (1) Glass/Erlenmeyer Flask including additional items. Increased cell densities achieved from the Thomson Ultra Yield™ Flask result in increased biomass of recombinant protein and DNA. Results show an approximate 400% cost savings with the Thomson Ultra Yield™ Flask over the standard Glass/Erlenmeyer Flask.

Thomson Ultra Yield Flasks	Cost
Media Costs for Ultra Yield Flask	$20.00
Cell Disruption/Lysis Buffer	$19.33
Protein Purification	$120.00
Assay/Analysis	$100.00
Total Cost to Run	**$259.33**

Glass / Disposable Erlenmeyer Flasks	Cost
Media Costs for Glass Flasks	$120.00
Cell Disruption/Lysis Buffer	$115.98
Protein Purification	$720.00
Assay/Analysis	$100.00
Total Cost to Run	**$1,055.98**

Cost Benefit Analysis

Ultra Yield™ Flask [patented] Disposable vs Reusable

Cost Benefit Analysis of Thomson Ultra Yield™ Flask Disposable to Reusable Flasks. The Thomson Ultra Yield™ Flask is priced to be a disposable bioreactor or disposable shake flask. The Thomson Ultra Yield™ Flask may be reused a number of times following sterilization; however, a limit of three uses is suggested. The cost of the flask is significantly cheaper than the effort required for autoclaving (with labor at ~$100.00/h it does not make sense to reuse the product).

Ultra Yield Flasks Disposable	Cost
Thomson UYF™ 250mL	$6.00
Total cost to run	**$6.00**

Reusable	Daily Cost of Cleaning
Water	$1.58
Electricity	$2.24
Hazardous waste water	$15.80
Labor	$100.00
Total cost to run	**$119.62**

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Cost Savings Comparison

Ultra Yield™ Flask [patented] Protein Yields vs Old Methods

Cost Savings Comparison on Protein Yields using Thomson Ultra Yield™ Flasks and traditional shake flask designs. Fewer consumables, including media costs, number of flasks and Lysis buffer substantiate the cost benefit of using Ultra Yield™ Flask over other flasks. Traditional shake flask designs cannot approach the cell densities that are achievable in the Ultra Yield™ Flask and Thomson Plasmid+ Media™

Cost Benefit of Using Ultra Yield™ Flask

Consumable	Cost Benefit
Number of Flasks Needed	**1 vs 6**
Media Costs for Ultra Yield Flask	**600% Less**
Cell Disruption/Lysis Buffer	**710% Less**
Protein Purification	**600% Less**
Assay/Analysis	**Same**
Disposable vs Reusable	**1993% Less**

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