

cost-of-use analysis for : DISHWASHING DETERGENT

1 WATER USED TO DISPENSE PRODUCT:

U S CHEMICAL
2 x 3100 mL
0 gal. used

Competitor
36 lb. case
17.1 gal. used per lb.*

2 WATER USED PER CASE TO DISPENSE PRODUCT:

U S CHEMICAL
(A) = 0 gal. per case

Competitor
(B) = 36 lb. x 17.1 = 615.6 gal.

3 MINIMAX VS. EXCESS GALLONS OF WATER TO DISPENSE SOLID:

(A) - (B) = Excess
0 - 615.6 = 615.6

4 COST TO HEAT WATER USED IN DISPENSING PRODUCT TO WASH TANK:

	8.33
Times	<u>75</u>
Equals	624.75
Divided	<u>3413</u>
Equals	0.183050103
Times	<u>0.21</u>
Equals	\$ 0.0384
Times	<u>615.6</u>
Equals	\$ 23.66

Pounds = Weight of 1 gal. of water
Degree rise (60 incoming raised to 135)
BTU's required per gallon
BTU conversion factor to kWh
kWh
National average cost per kWh**
Cost per gallon for 60 degree rise
Excess gallons consumed
(C) Excess cost for heating transport water

5 COST TO HEAT DISPENSE WATER IN WASH TANK:

	8.33
Times	<u>25</u>
Equals	208.25
Divided	<u>3413</u>
Equals	0.061016701
Times	<u>0.21</u>
Equals	\$ 0.0128
Times	<u>615.6</u>
Equals	\$ 7.89

Pounds = Weight of 1 gal. of water
Degree rise (135 incoming raised to 160)
BTU's required per gallon
BTU conversion factor to kWh
kWh
National average cost per kWh
Cost per gallon for 25 degree rise
Excess gallons consumed
(D) Excess cost for heating transport water in wash tank

6 COST OF WATER USED TO TRANSPORT DETERGENT:

National average cost for water per 1000 CF (cubic feet) is: \$ 15.00
National average cost for sewage per 1000 CF (cubic feet) is: \$1.50
Conversion factor for CF to gallons is 0.13368
615.6 x 0.13368 = 82.293408
82.293408 / 1000 x 3 = cost of transport water
(E) \$0.25 = cost of transport water

7 TOTAL ADDITIONAL COST TO DISPENSE A CASE OF SOLID DETERGENT:

Electric	+	Wash tank electric	+	Water cost	
(C)		(D)		(E)	
\$ 23.66	+	\$ 7.89	+	\$ 0.25	=

Total additional cost
\$ 31.80

* All examples shown are based upon actual laboratory conditions of constant water pressure and constant water temperatures.

** Actual electric, water and sewage rates vary. Use of the actual rate for each utility in your area to provide an accurate picture of the conditions in a case. Actual costs could be significantly higher...and the savings could be much greater.