

# Green Team Product Contract

**Product Description:** A single unit bottle washer and water dispenser

**Intended Customer:** Fitness center

**Market:** Commercial bottle washer and water dispenser

**User:** Water bottle user

**Potential Client:** Tim Moore, MIT DAPER

Bottle Washer				
Attribute	Metric	Unit	Value	Owner
ease of use	number of steps	unitless	<3	group
interface usability	amount of time for user to insert bottle and begin washing process	sec	<6	HM, JT
interface usability	height of activation switch	ft	4.0-5.0	SH
convenience	amount of time to wash bottle	sec	<15	group
washing capability	temperature of washing water	°F	>168 <sup>a</sup>	group
washing capability	presence of total coliforms on washed bottle	binary	0 <sup>b</sup>	MC, VC
washing capability	presence of visible sediment on washed bottle	binary	0	MC
maintainability	time between replacement of detergent	week	2	WV
efficiency of water use	amount of water required to wash	L	<2	PT
efficiency of detergent use	amount of detergent used per bottle	tsp	<1	PT
bottle compatibility	range of cylindrical bottle diameters	in	<4	group
affordability	cost of soap per month	\$	<10	MH

<sup>a</sup> 168°F = temperature required to kill bacteria

<sup>b</sup> EPA maximum total coliform level

Water Dispenser				
Attribute	Metric	Unit	Value	Owner
ease of use	number of steps to dispense water	unitless	<3	group
water quality	temperature of dispensed water	°F	<50 <sup>a</sup>	group
water quality	presence of total coliforms	binary	0	MC
interface usability	time to place bottle and begin dispensing	sec	<3	JT
interface usability	flow rate of dispensed water	mL/sec	>27	CH
interface usability	height of activation switch	ft	4.0 - 5.0	SH
maintainability	time between changing water filter	month	>5	VK
maintainability	time to change water filter	minute	<10	WV
affordability	cost of filter	\$	<30	MH

<sup>a</sup> 50°F average temperature of cold water from water fountains

Entire Unit				
Attribute	Metric	Unit	Value	Owner
maintainability	time to clean chamber and drain of entire unit	minute	<10	WV
maintainability	time between cleaning chambers	week	>2	group
eco friendliness	energy used for washing and dispensing per cycle	MJ	<4 <sup>a</sup>	GT
location compatibility	base area of machine	ft <sup>2</sup>	<2	group
affordability	cost of machine	\$	<1000	VK, MH

<sup>a</sup> Eco friendliness - amount of energy to manufacture one PET water bottle