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Martin's Tech Guide on

Domestic vs Laboratory Glass Washers

So... what's the difference between a laboratory glassware washer and a domestic dishwasher?

I've been asked this many times myself, usually by management, in my previous role as a science technician – and it's a reasonable question to ask, when considering departmental budget allocations for the academic year.

A domestic dishwasher is designed specifically for domestic use (cutlery, crockery, etc) and is NOT corrosive resistant. As soon as you use a domestic dishwasher for scientific equipment you void the warranty – and reduce its life expectancy and efficiency (in my experience 1–2 years of life).

Aside from maintaining its warranty, there are other perks to having a laboratory glass washer in your science department:

- **Saves you time** – no pre-rinsing required, just load and go.
- **Corrosive resistant** – has a lifespan of 15–20 years.
- **Quicker cycles** – you can turn around a large volume of glassware and get it back into the class more quickly, ready to be used again.
- **Designed for labware** – such as beakers, test tubes, conical flasks, and graduated cylinders as opposed to plates, cups, and cutlery. This offers more effective use of space meaning fewer washes and more efficient removal of hazardous residues. Laboratory glasswashers have options for internal racking that may include specialised injectors, designed to clean the inside of test tubes, etc – which will also saves time spent scrubbing!
- **Higher temperature = better sanitation**, glassware washers will heat water to about 93°C. Domestic washers typically heat water to between 55–75°C, this temperature range is too low to adequately sanitise.

Domestic vs Laboratory Glass Washers

Before You Order

Shelving Options: Unlike domestic washers, laboratory washers are not supplied with upper and lower baskets. This is due to the wider range of available options.

Below is an example of an **education setup** which contains all you need to get you started and is suitable for most schools and colleges:

Code	Description
WAS4050	Smeg Laboratory Glassware Washer GW0160
WAS4052	Smeg CS1-1 Upper Trolley with Sprayer
WAS4054	Smeg CS2 Lower Trolley
WAS4056	Smeg SB15 Spring Support, 16 Positions
CP222	Smeg Test Tube Support

Remember to fill the top and bottom trolleys for optimal use, you require 4 x half inserts so you can mix different spring supports for glassware with baskets (CSK2).

Installation is simple - the same procedure as installing a domestic dishwasher.

Optional extra for washing narrow neck/volumetric flasks, pipettes and even burettes: injectors racks.

Certain glassware washer racks can pump hot air through the same injectors during drying cycles to remove moisture from the inside of the glassware. Depending on demand requirements, these can be added later and are easily removable and swapped out for the standard baskets.

The bottom line is the outlay cost is higher, but in the long-term, the cost is justified with a much longer life expectancy of +15 year and offers a better and more reliable service.

Top Tip:
Buy rimless test tubes if you plan to machine wash them as they are much less prone to chipping and cracking during wash cycles.