

The superior hygiene properties of the Waterless Urinal are directly attributable to its unique design and nonporous gel-coated surface which is highly resistant to water deposits, urine accumulation and bacterial residue; and the fact that the Waterless Urinal requires no water for flushing. Urine in its natural form is sterile and only contains bacteria when water is added. This defies the common belief that the conventional water using urinals would be more hygienic than Waterless Urinals. A recent study by an independent German government agency, LGA (Landesgewerbeamt Bayern) found that using Waterless Urinal system reduces bacteria concentrations in the urinal bowl area dramatically when compared to the conventional water using urinals.

More specifically, LGA found bacteria concentrations levels of between 114.42 to 360.54 KBE/100cm² inside the conventional water using urinal bowl areas, compared to .6 to 42.30 KBE/100m² found inside the Waterless Urinal bowls indicating **63% to 99% reduction in bacteria** concentrations. The report also displayed the advantages of touch free operation. As part of the process, LGA tested the flush handle and found that the handle contained 275.00KBE/100m². The table below displays the results of the bacteria concentrations analysis performed by LGA, the study displays the testing of 2 conventional water using urinals, the flush valve handle and 4 waterless urinals all tested under normal conditions.

Types of urinal and Testing Method	Results (KBE/ 100cm ²)*	Results (KBE/ 100cm ²)*
Urinal using water. Inner bowl - surface, before flushing	114.42	Bacteria, Fungus, Mould
Urinal using water. Inner bowl - corner & side walls, before flushing	218.00	Bacteria, Fungus, Mould
Urinal using water. Inner bowl - surface, after flushing	380.54	Bacteria, Fungus, Mould
Urinal using water Inner bowl - corner & side walls, after flushing	188.00	Bacteria, Fungus, Mould
Flush valve handle	275.00	Bacteria, Fungus, Mould
Urine	0	Sterile
Waterless Urinal No. 1, not cleaned	0.6	Bacteria
Waterless Urinal No. 2, not cleaned	18.00	Bacteria
Waterless Urinal No. 3, not cleaned	42.3	Bacteria
Waterless Urinal No. 4, not cleaned	6.00	Bacteria

* NOTE: KBE/ 100cm² = thousand units of Bacteria per 100cm²

NB. An independent laboratory commissioned by the German Government in 1997/98 (Landesgewerbeamt Bayern) provided all information in this chart.