

STAGES OF THE POTABLE WATER CYCLE	ADOPTABLE MATERIALS
COLLECTION	Stainless steel, concrete, galvanised steel, cast iron
TREATMENT	Stainless steel, concrete, galvanised steel
STORAGE	Stainless steel, concrete, galvanised steel, PE
TRANSPORT	Stainless steel, concrete, galvanised steel, cast iron, PE
END DISTRIBUTION	Stainless steel, galvanised steel, PE, copper
DOMESTIC TAPS	Stainless steel, brass with chromium plating or with other types of plating

Table 1: Stainless steels and other materials adoptable in the different stages of the potable water cycle

Designation according to EN 10088 (AISI)	C	Cr	Ni	Mo
1.4301 (304)	0,07 max	17,00 ÷ 19,50	8,00 ÷ 10,50	-
1.4306 (304L)	0,030 max	18,00 ÷ 20,00	10,00 ÷ 12,00	-
1.4401 (316)	0,07 max	16,50 ÷ 18,50	10,00 ÷ 13,00	2,00 ÷ 2,50
1.4404 (316L)	0,030 max	16,50 ÷ 18,50	10,00 ÷ 13,00	2,00 ÷ 2,50

Table 2: Chemical composition of the stainless steels mainly used in the potable water cycle

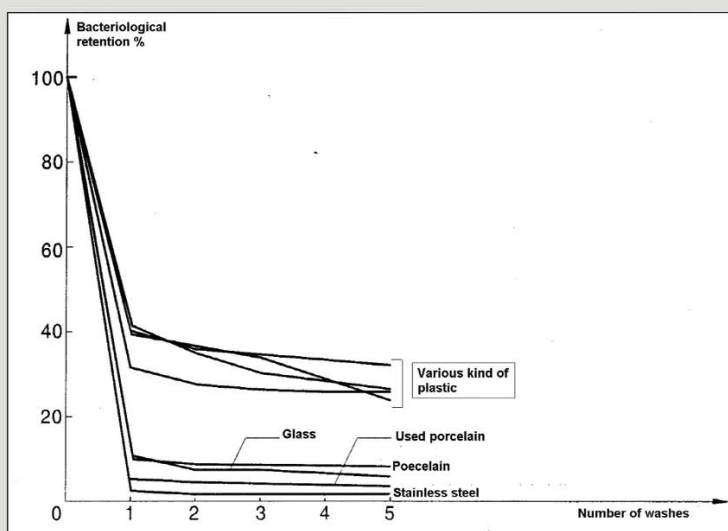


Fig.1: The trend in bacteria retention potential according to the number of washes for surfaces, in various types

Test performer	Test procedure
Co-normative research	BS 7766:1994 and rig
DWI (Drinking Water Inspectorate)	BS 7766 modified
ITS (Interlek Testing Services)	BS 7766:2001
European Commission Directorate - General for Research - Technical Steel Research "Assessment of stainless steels' compatibility in food and health applications regarding their passivation ability" – Contract No 7210-KB/422, 340 (1 July 1996 to 30 June 1999)	-) Evaluation of the leaching rate in synthetic drinkable water with immersion test of one week at 23 °C and 70 °C -) Electrochemical study in the same water to plot the polarisation curves
LaQue Center for Corrosion Technology, Inc - "Hazard Classification of Alloys" - Prepared for the International Council on Metals and the Environment	Corrosion leaching tests
British Steel plc, Swinden Technology – Avesta Sheffield Ltd ECSC contract 7210.MA/818	Leaching rig tests

Table 3: Test performers and test procedures performed in various laboratories on stainless steels