

# Particle and TOC tests

Particle and TOC tests according to SEMI F104 confirm a high degree of purity for Bianca butterfly valves in high-purity execution.

## High requirements for high-purity applications

The reduction of all types of contamination is the most important goal in the production of contamination-sensitive products, such as in the semiconductor or pharmaceutical industry. To guarantee a fault-free production process and exclude critical residues, all products used in the manufacturing process must show a high degree of purity.

The trace analysis department of Exyte Technology GmbH, specialist for clean room technologies and controlled environments, was entrusted with particle and TOC tests according to SEMI F40 and F57. Both tests confirm that Bianca butterfly valves in high-purity execution feature a high degree of purity and are perfectly suited for use in the production of contamination-sensitive products.

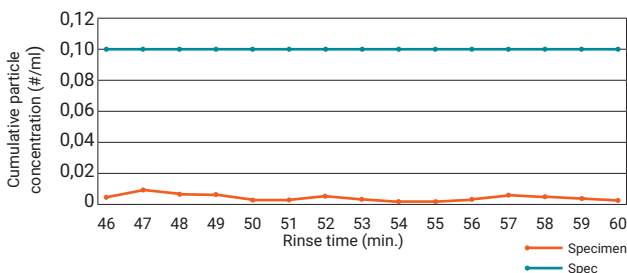


## Particle test

The particle test according to SEMI F40 and F57 allows a maximum limit value of 0,10 particles/ml. Bianca butterfly valves achieved a test value of 0,01 particles/ml, which is far below the permitted value.

Results Summary			Specification
Process flow	2,0	L/min	
Rinse time	60.0	min	
Water resistivity	18,1	MΩ-cm	>18,0
Water temperature	15,6	°C	
Background	0,02	particles/ml	<0,05/ml
Particles in water	0,01*	particles/ml	< 0,10/ml
Particle size		µm	≥0,1

\*average of four tested components for last 15 minutes of rinse time



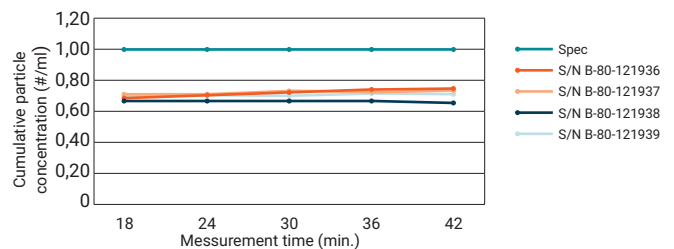
## TOC test

The TOC test according to SEMI F40 and F57 defines a limit value of < 1 ppb.

Bianca butterfly valves achieved a test value of 0.7 ppb.

Results Summary			Specification
Process flow	2,0	L/min	
Rinse time	60.0	Min	
Water resistivity	18,1	MΩ-cm	>18,0
Water temperature	15,6	°C	
TOCw	0,70	ppb	<1
Coef. of variation	3	%	<10

\*average of four tested components for last 15 minutes of rinse time



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