

# The Porto Protocol

More than just a commitment.

## Case Study

### **BIAL – Reduction of volatiles organic compounds and waste**

For a long time Bial is concerned about the potential environmental impacts of its industrial activity, seeking to find opportunities to reduce its footprint as much as possible.

A commitment formally integrated in our management system, which restarts every year with the report “Environmental Aspects, Risks and Opportunities”, and involves Quality, Environment, Occupational, Health and Safety Management Plan, ending with the Performance Analysis – Quality, Environment, Occupational Health and Safety.

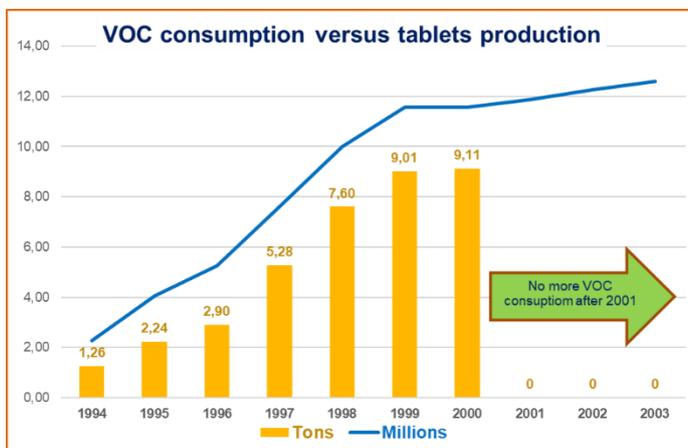
## **2001 - The beginning: Reduction of volatiles organic compounds**

Back in 2001, BIAL was already committed to contribute to the preservation of the environment by implementing an Environmental Management System. One of its goals was the significant reduction of the volatile organic compounds’ emission. Therefore, a project has been initiated to eliminate organic solvents at source, which includes, among other actions, the replacement of the organic coating of BIAL’s antibiotics with an aqueous one.

The relevance of this replacement has been evident and with this measure BIAL achieved a reduction of 9.4 tons/year in the emission of volatile organic compounds, eliminating the inherent hazards of handling flammable and toxic substances.

Replacement of the organic coating with an aqueous equivalent led to modifications in the qualitative-quantitative composition of the product, in the manufacturing process, in the control of raw material / intermediate / finished product.

And since 2000, BIAL had no more consumption of VOC in Antibiotics!

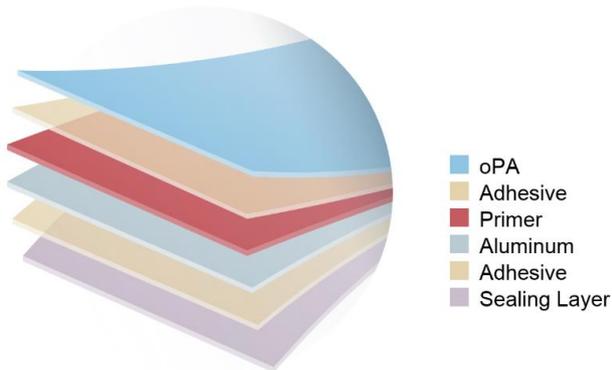


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## Two years ago (2016-2018): Waste reduction

The goal was to find an optimum blister size to minimize the waste produced by the patients when they finish the medication.

The forming side of the aluminium blister is composed by a laminate of several films glued by adhesives:



The goal was to reduce the area of blister to the minimum through changing the printing systems, blister appearance and improve controls of the equipment to reduce blister area.

The results shown a sustainable reduction of 30% in laminate consumption per blister.

	2013-2015 Average	2016	2017
Blisters production (units)	7 075 180	7 248 589	10 846 360
Laminate consumption (kg)	31 519	22 732	28 340
Laminate kg/1000 bls	3.85	3.14	2.61
		-19%	-32%

The 2018 results maintained the same positive result.

Below, old blister size against the new one:

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