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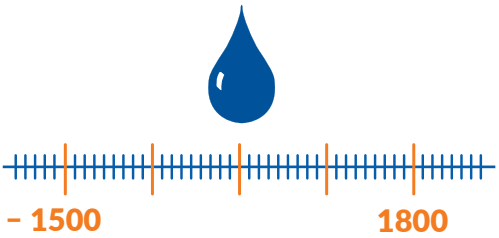
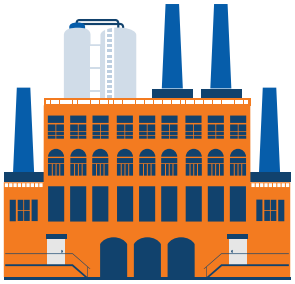
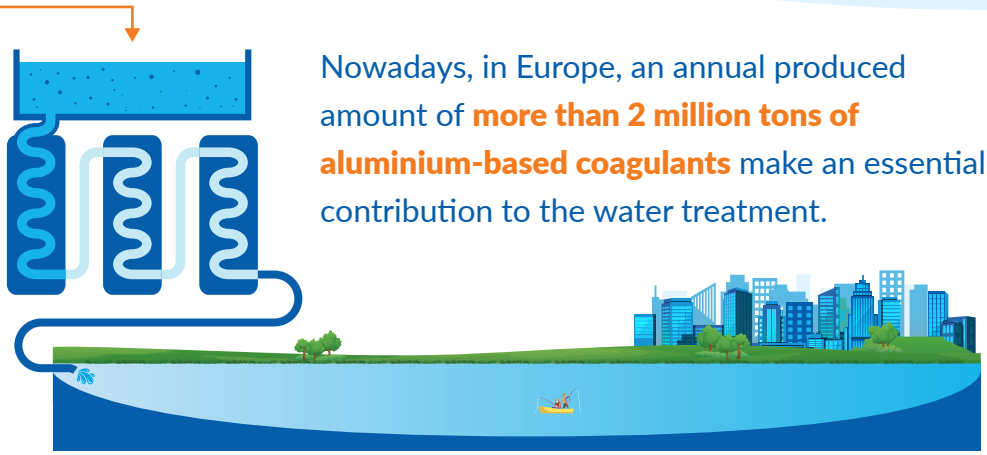
Aluminium-based coagulants
CIRCULAR ECONOMY IN ACTION





The Egyptians first used coagulants (Alum) to purify drinking water more than 3500 years ago. The mid-1800s saw an increase in population and urbanisation linked to **industrial revolution which in turn required enhanced water treatment solutions.** Aluminium-based coagulants started to be **manufactured on an industrial scale** by having an aluminium source to react with an acidic or a basic source.

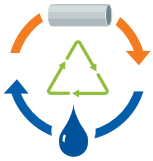
2M
TONS/YEAR



Nowadays, in Europe, an annual produced amount of **more than 2 million tons of aluminium-based coagulants** make an essential contribution to the water treatment.

Over the past decades, an **increasing amount of by-products from other industries** are being used as raw materials[1]

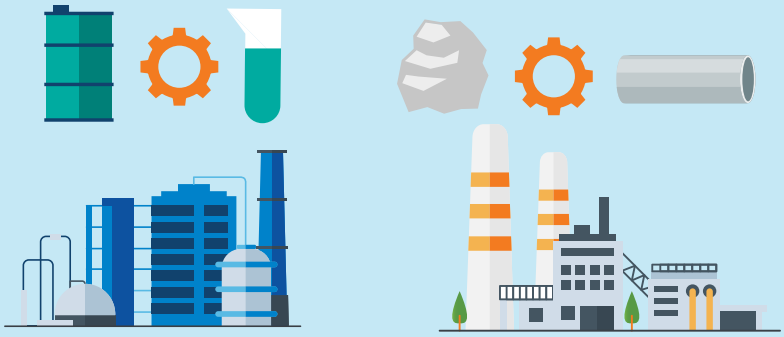
70% of the acids used are **by-products.**



An **increasing percentage of the aluminium** used comes from by-products.

[1] For more details, see the INCOPA LCA Executive Summary of the IVL Swedish Environmental Research Institute study, 2023, available on the INCOPA publications webpage.

INCOPA is the European Inorganic Coagulants Producers Association and it represents more than 30 producers with more than 80 production sites in Europe, which are responsible for 85% of the European coagulant production capacity.

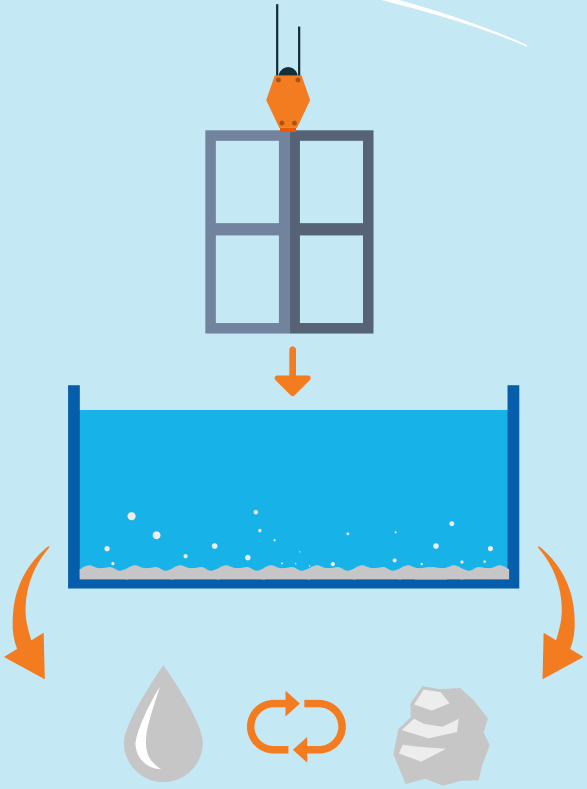


Because of the large volume of aluminium-based raw materials required for its coagulant business, **our sector works closely with the chemical industry to source the acids**, and **with the aluminium value chain to obtain aluminium by-products.** These by-products therefore contribute to the circular economy.

ALUMINIUM CIRCULARITY

As an example, in the aluminium window frames industry, **metal finishing generates several by-product streams**, which can be used as either a solid or liquid aluminium source for the coagulant production.

These by-products can be used as raw materials in aluminium coagulant plants.



By valorising by-products **we contribute to saving resources**, such as aluminium ore or chemical feedstocks whilst producing a key element to treat water and protect our environment.

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