

Over 60 years' expertise in

**Phosphoric Acid
And
Phosphate-Based
Products**



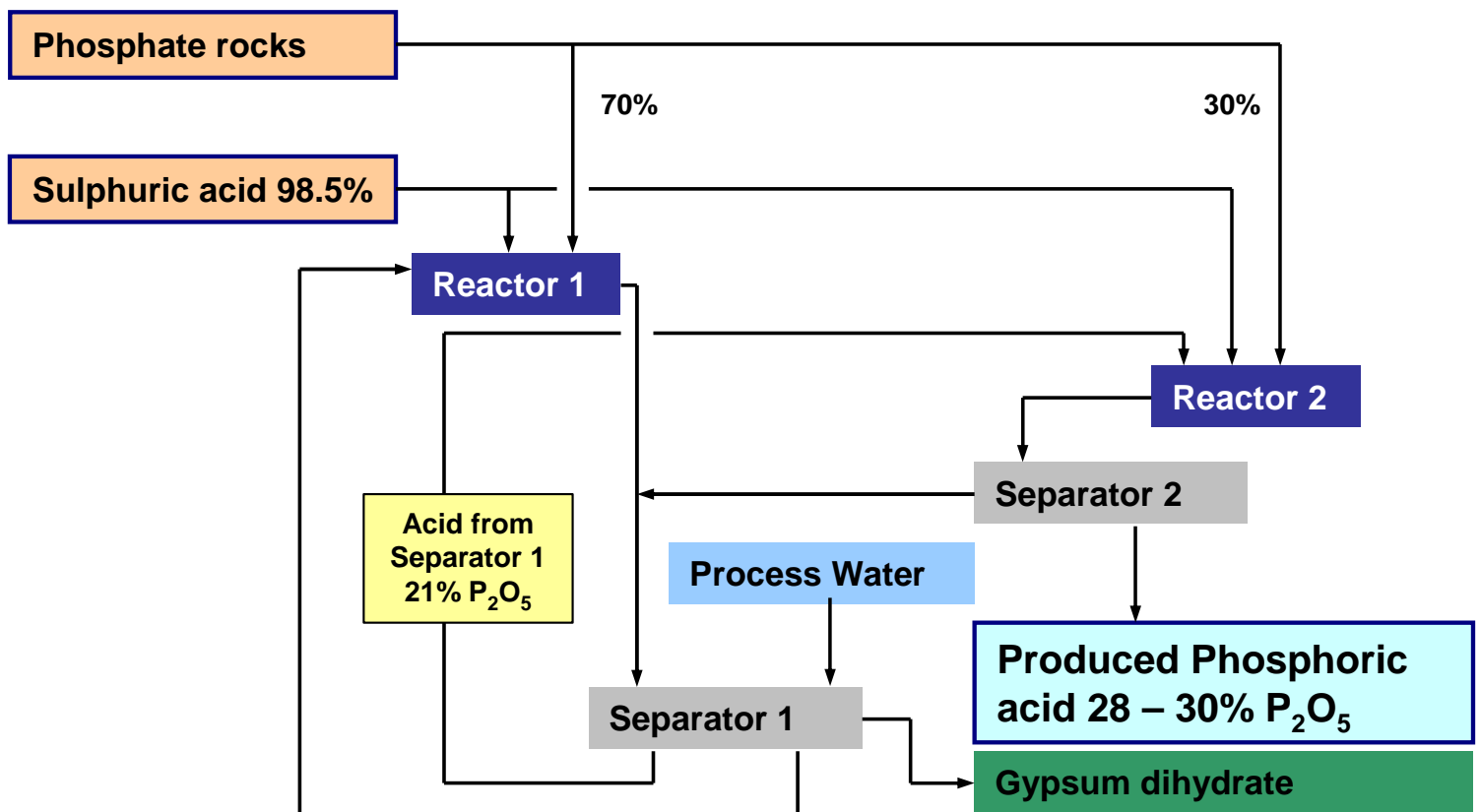
*The right partner
for quality phosphate processes*

In business for more than 60 years, VICHEM has become a world leader in the production of phosphoric acid and phosphate-based products, from Merchant Grade Acid to Food Grade Acid Production, and including:

- Merchant Grade Phosphoric Acid
- Superphosphoric Acid
- Defluorinated Phosphoric Acid
- Technical Grade Phosphoric Acid
- Food Grade Phosphoric Acid
- Polyphosphoric acid
- Fertilizers: SSP, GSSP, TSP, DAP, SCU...
- Detergents: STPP
- Animal feed: MCP, DCP
- Additives for human food
- Specialty products

VICHEM's patented wet process for the production of merchant grade phosphoric acid

In the context of the diminishing availability of high-quality phosphate rock, and of its increasing price, VICHEM has developed and patented a process which provides a significant improvement on the attack process on phosphate rock by sulphuric acid, in accordance with the dihydrate process.



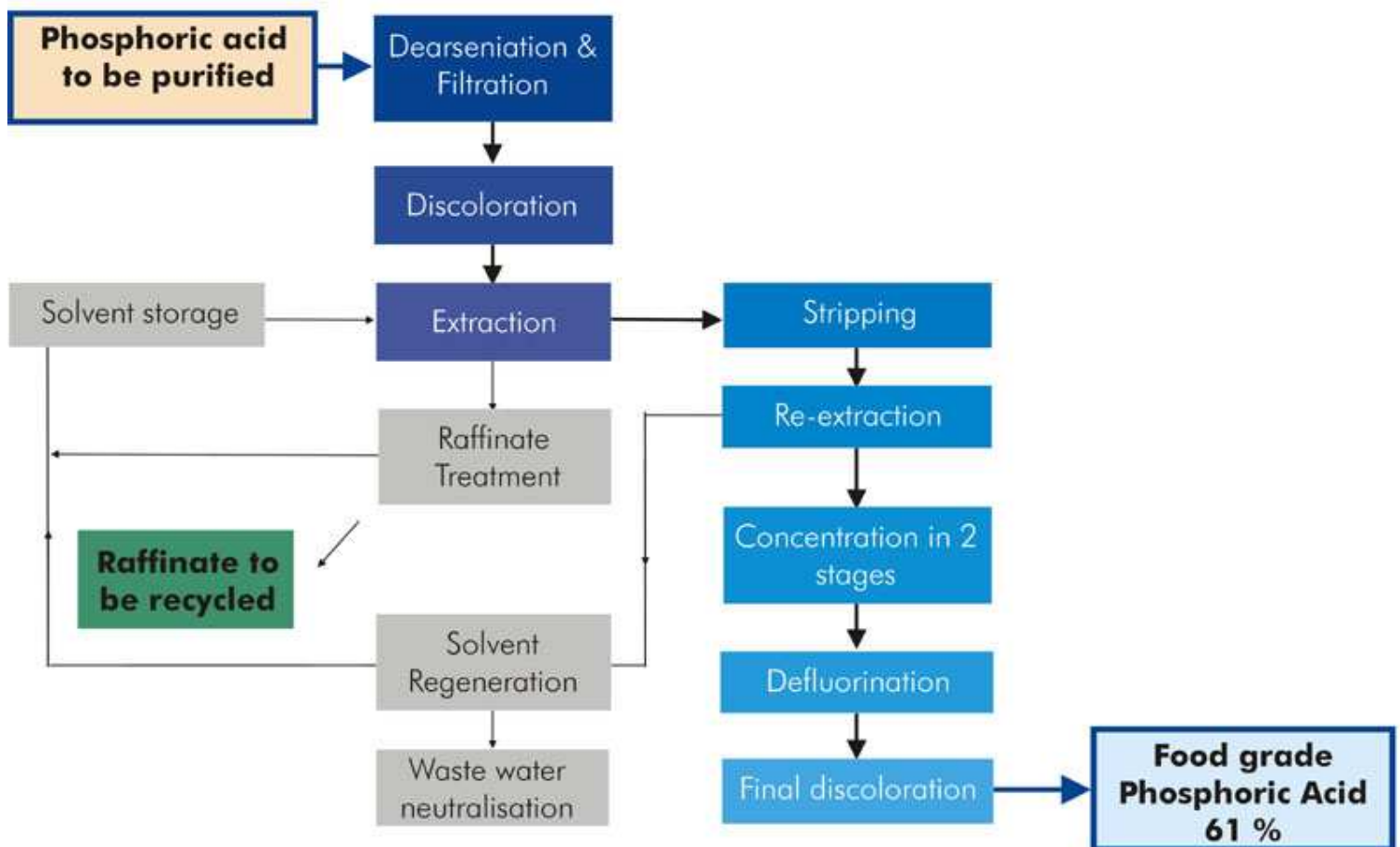
This process, consisting in two successive sets of reactors-separators, presents the following advantages:

- **Increase of capacity:** up to 50% only by adding two pieces of equipment
- **Increase of the yield:** up to 96-97%, even with low quality phosphate rocks
- **Increase of the stability:** thanks to the two reactor-filter sets
- **Lower energy consumption:** higher P₂O₅ concentration, less steam needed

From Merchant-Grade Phosphoric acid to Food-grade phosphoric acid

The degree of purification varies with the final applications, and the purification units described below can be partially used. The first application is for the production of technical grade acid to be used for detergent under the form of sodium tripolyphosphate (**STPP**). The full purification process will be used for the production of food grade Phosphoric Acid. VICHEM offers turnkey plants for all these applications.

VICHEM's advanced purification process for wet phosphoric acid to get food grade Phosphoric Acid



- P_2O_5 recovery : 95% - 97%
- Raffinate recycled to attack tank or to be used to produce Ammonium Sulphate
- Low cost of operation
- Lower power consumption than thermal process: 5 times less calories and 15 times less kWh
- Environment-friendly



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Represented by:

