LOW-TEMPERATURE TECHNOLOGY FOR NEUTRALIZATION OF PERSISTENT ORGANIC POLLUTANTS

Areas of Application

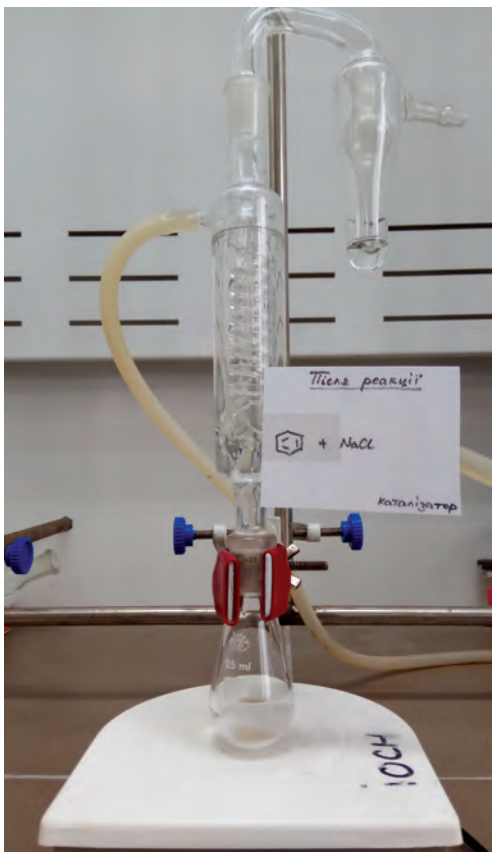
The technology is to be used for neutralization of persistent organic pollutants (POPs) at low temperatures at enterprises of chemical and other industries

Specification

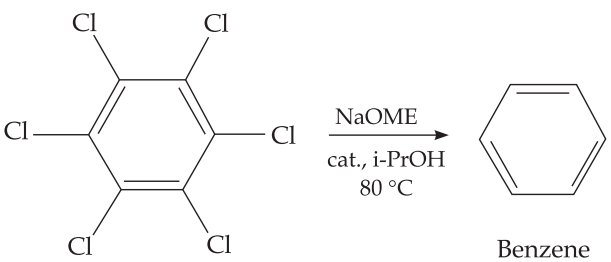
The technological process is carried out at 80 °C under the action of sodium methoxide on chloroorganic compound in the presence of 0.003—0.005 mol% catalyst in solvent. Only standard equipment is used in the technology

Advantages

The technology has no world analogues. It enables the neutralization of POPs (hexachlorobenzene, dioxins, polychlorobiphenyls, DDT, DDE) at low temperatures (under 80 °C). As compared with the high temperature technologies (1100—1200 °C) the new method makes it possible to save energy, to refuse from absorbers of volatile products, which simplifies the process, and to proceed to direct absorption and neutralization of hazardous substances (for example, dioxines)



Reaction mixture after hexachlorobenzene neutralization



Hexachlorobenzene (POP) — Benzene (solvent)

Neutralization of hexachlorobenzene

Stage of Development. Suggestions for Commercialization

IRL3, TRL3
The laboratory technology is ready.
The implementation of industrial technology needs preparatory works

IPR Protection

IPR1, IPR3

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