

Organization	„Alecu Russo” Bălți State University
Patent / patent application title	THE COMBINED PROCESS OF IMPROVING PHYSICAL AND CHEMICAL PROPERTIES OF INDUSTRIAL GLASSWARE
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Patent / patent application N°	Patent RU. No. 2035419 C1. No. 14 / 20.05.95
Description	<p>The essence of the developed technique: in manufacturing conditions, glass containers (bottles, jars and flasks) have been treated with fluorine-containing gaseous reagents (hydrogen fluoride, difluorodichloromethane and difluorochloro-methane) without dealkalization and subsequently subjected to the influence of constant magnetic field. Glassware underwent the following treatment regimes: temperature – between 500 and 700 °C, vector's magnitude of magnetic induction - up to 0.25 T, duration – between 1 and 8 s, volume fraction of gas (gas volume vs. container capacity) about 0.1 %. As a result of this combined treatment, the chemical stability of glass increases tenfold, mechanical strength - by 20-40 %, microhardness - by 10-20 %, thermal stability - by 5-10 %.</p> <p>Esența procedurii elaborată: în condiții de fabricare ambalajul din sticlă (butelii, borcane și flacoane) a fost tratat cu reagenți gazoși ce conțin fluorură (fluorură de hidrogen, difluoridiclorometan și difluorclorometan) fără fenomenul dezalcalinizării și supus acțiunii câmpului magnetic constant.</p>
Domain	Chemistry and chemical industry