

LARGE SCALE APPLICATION OF HIGH PERFORMANCE LOW TEMPERATURE DEHYDRATION AS AN INDISPENSABLE CONDITION OF SUSTAINABLE DEVELOPMENT

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ABSTRACT

The role is reconsidered of low temperature dehydration (freeze drying and vacuum drying) in the present-day technologies. The entire process of drying is divided into three stages: concentration, drying proper and finish (“technological”) drying. Each stage is optimized from the point of view of energy consumption efficiency: for the first stage cryoconcentration is justified, efficiency at the second stage should approach to that one of the inverse Carnot cycle and at the last stage it is indicated microwaves to be applied. The results of the respective testing of technical solutions are discussed.

REFERENCES

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