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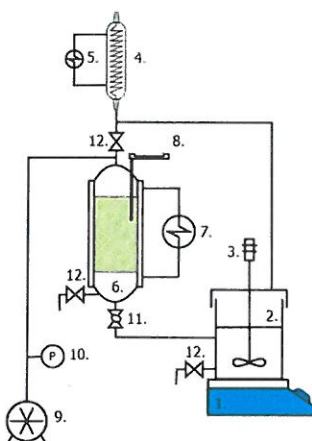
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Processing of waste from wine industry into products with substantial added value

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Viniculture generates a quantity of waste but appropriate methods for its processing have not yet been developed. Hence, it is mostly used for composting or combustion, although it contains considerable amount of bioactive substances, which can find use in agriculture, cosmetics, or food. The aim of this work is to select and optimize extraction methods for the processing of grape cane and wine marc, and design and assemble a functional sample of a multipurpose laboratory unit, see Fig. 1, combining various extraction techniques (Soxhlet and ultrasonic extraction, maceration, temperature and pressure control), offering thus potential for the treatment of different plant waste.

Several extraction techniques were used for the extraction of waste products from wine industry - grape cane and grape marc. Our research was focused mostly on the content of ϵ -resveratrol and viniferines in the isolates. Content of biologically active compounds in

plant isolates was measured with HPLC/ MS system.

We observed significant differences in terms of yields of the extracts processing times and volumes of solvent. Most efficient method was PLE when grape marc yield was 102,8 mg per g of plant material with the extraction time of 30 minutes and consumption of IPA equal to 80.25 ml. Milling of plant material resulted into significant increase in extraction yields.

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