

EVALUATION OF THE POLLUTION DEGREE OF WASTEWATER FROM OIL MILLS IN ROMANIA

Elena Scutelnicu (Păun)¹, Constantin D. Stanescu², Mariana Patrascu (Antonescu)³

^{1,2,3} Polytechnic University of Bucharest; e-mail: ellenapaun@yahoo.com, prof_cstanescu@yahoo.com, maryana_antonescu@yahoo.com

Abstract : This paper presents the evaluation of the degree of pollution of wastewater from oil mills and margarine in Romania. Preliminary experimental researches were conducted on polymer flocculent material obtained by irradiation with accelerated electrons, type PA (AMD-AA-40), copolymers of acrylamide and acrylic acid, used alone or in combination with classical electrolytes in difficult waters, in relation to the effectiveness of the treatment of classical chemical agents, such as ferrous sulphate, aluminum and lime.

Key-words: margarine, oil, waste water

1. INTRODUCTION

Oil factories in Romania have a working regime estimated at 300 days / year with 24 hours per day. The researches were carried on processing 100,000 tons sunflower flower

seeds annually. The Ecological Engineering Laboratory within the Alimentary Research Institute highlights the data on which the researches are based. Table 1 shows the characteristic data of an oil and margarine factory.

Table 1. Characteristic data of oil and margarine factory

Title	Symbol	The amount	UM
The annual volume of measured water	$Q_{\text{apaevacuata}}$	1 260 000	m ³ / year
Materials in suspension	$M_{\text{suspensie}}$	184 458	t/ year
Organic material contained in water discharged annually (biochemical oxygen consumption for 5 days)	M_{CBO_5}	239.837	t/ year
Oil content in water discharged annually	$M_{\text{S.ext.}}$	50 946	t/ year

Of the total volume of wastewater discharged annually, 30% are heavily polluted wastewater and 70% weak polluted

wastewater. Table 2 shows the evaluation of the polluting levels recorded in 20 oil and margarine factories in Romania.