

Theoretical and experimental investigation of the recyclability of TDI-based urethanes

Supplementary Information



Authors:

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György Marcell Tokaji

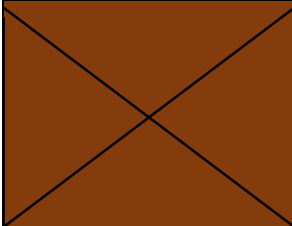
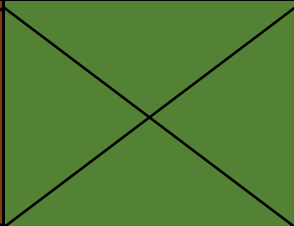
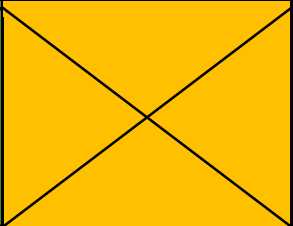
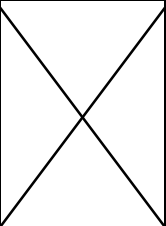
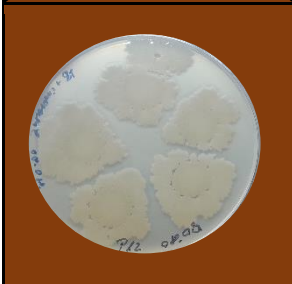
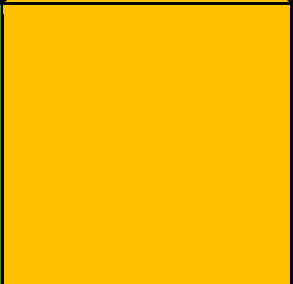
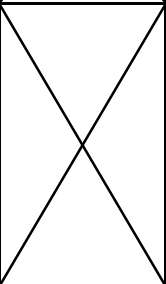
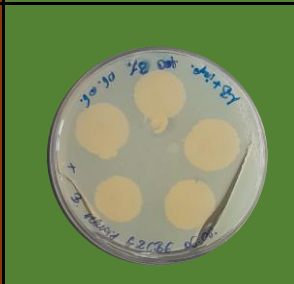
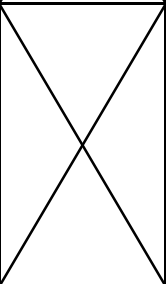
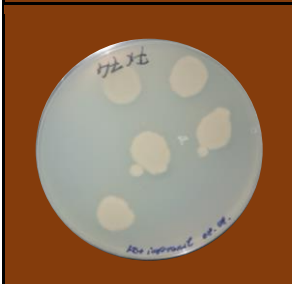
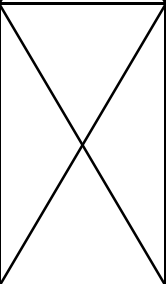
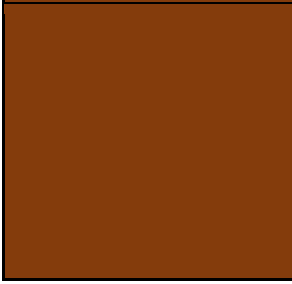
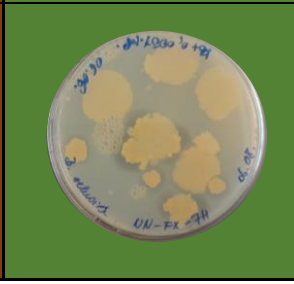
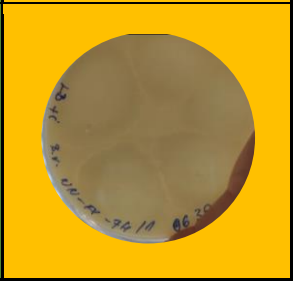
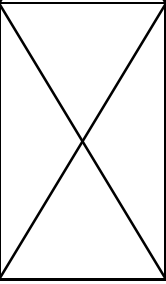
Supervisors:

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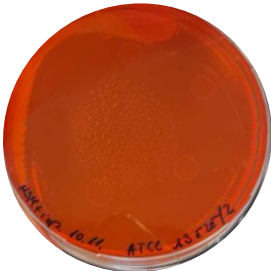
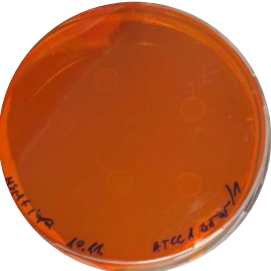
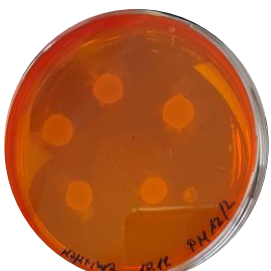
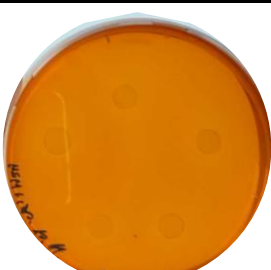
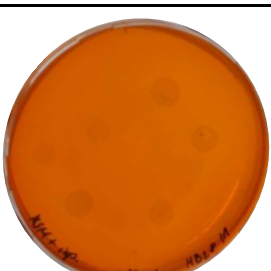
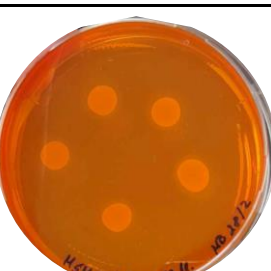
Dr. Renáta Zsanett Boros

Dr. Béla Fiser

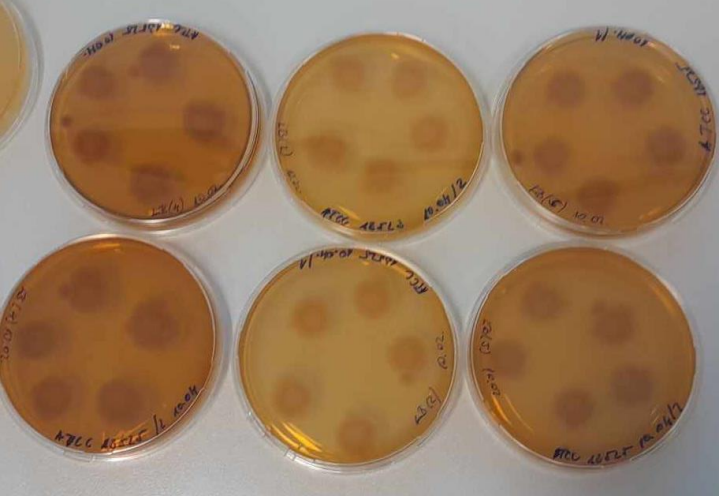
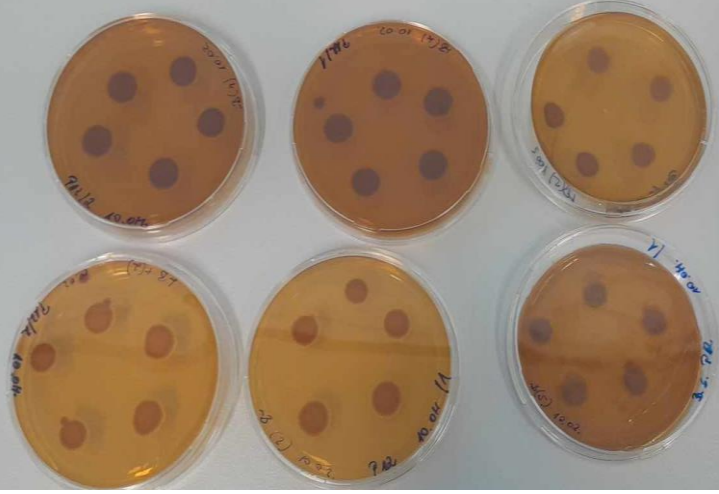
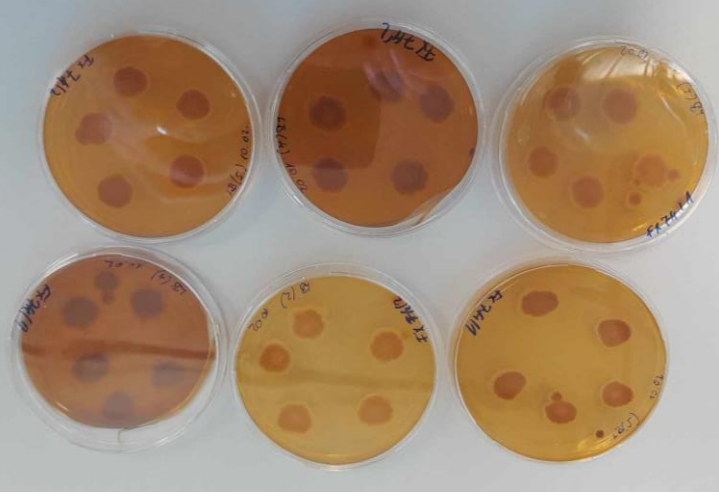
Institute of Chemistry
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Miskolc, 2023

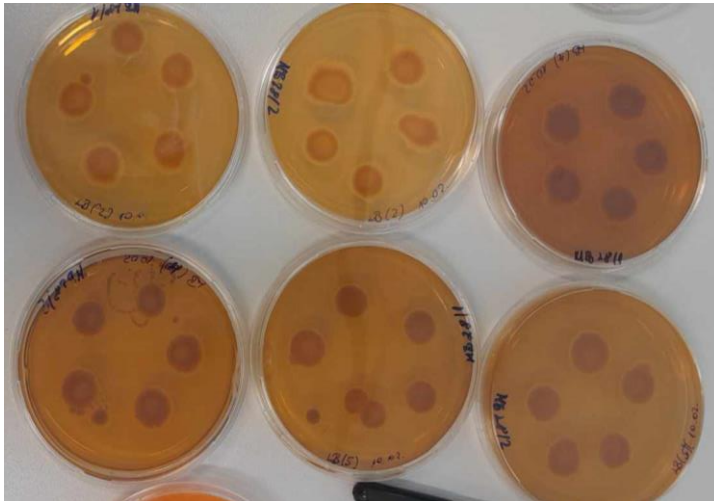
0,1%	0,3%	1 %	10%	Strains
				<i>Pseudomonas fluorescens</i> ATCC13525
				<i>B. subtilis</i> N11-PM12
				<i>B. velensis</i> GZCB6
				<i>B. subtilis</i> MD28
				<i>B. velensis</i> NN-FX-74

Annex 1 Results of esterase activity tests on LB agar plates up to 0,1-10% supplementation

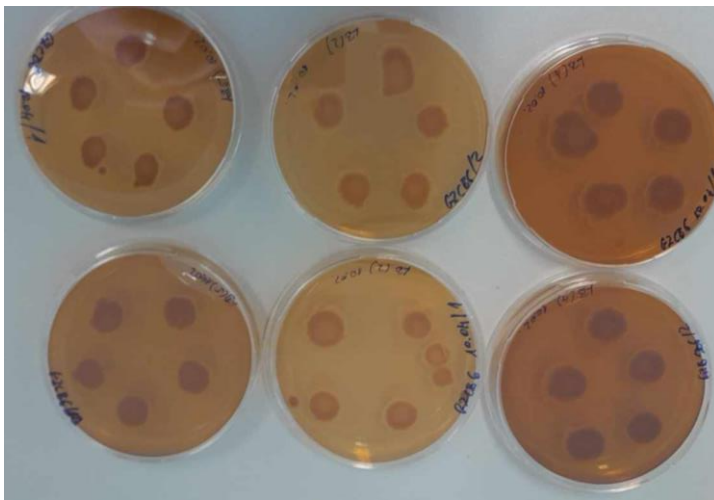
MSM+0,1% Impranil DLN SD 2 day	MSM+0,1% Impranil DLN SD 10 days	Strains
		<i>Pseudomonas fluorescens</i> ATCC13525
		<i>B. subtilis</i> N11-PM12
		<i>B. velensis</i> GZCB6
		<i>B. subtilis</i> MD28
		<i>B. velensis</i> NN-FX-74

Annex 2 MSM+0,1% Impranil DLN SD supplemented with methyl red. After 10 days of incubation, a white circle appeared around the colony, some kind of complex was formed.

LB+0,1% (15, 30 m/m% 2,4 TDI diurethane glycolysis product) 30 days	Strains
	<i>Pseudomonas fluorescens</i> ATCC13525
	<i>B. subtilis</i> N11-PM12
	<i>B. velensis</i> GZCB6

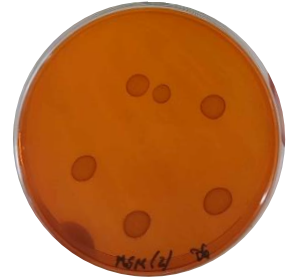
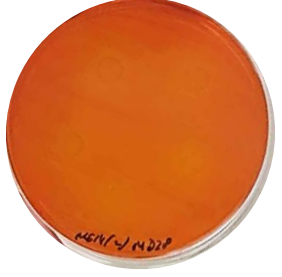
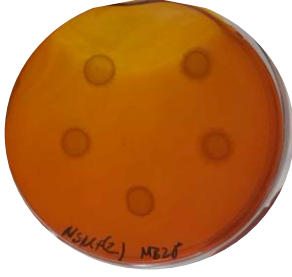
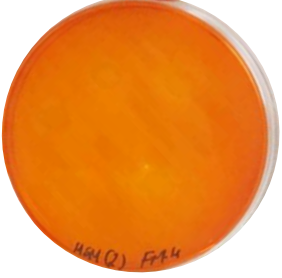


***B. subtilis* MD28**



***B. velensis* NN-FX-74**

Annex 3 LB+0,1% (15, 30 m/m% 2,4 TDI diurethane glycolysis product) substrate after 30 days

MSM+0,1% Glicolysis product 1 day	MSM+0,1% Glicolysis product 10 day	Strains
		<i>Pseudomonas fluorescens</i> ATCC13525
		<i>B. subtilis</i> N11-PM12
		<i>B. velensis</i> GZCB6
		<i>B. subtilis</i> MD28
		<i>B. velensis</i> NN-FX-74

Annex 4 MSM agar supplemented with 0,1% glycolysis product and methyl red