

Effect of biotic and abiotic degradation on the surface and bulk of rubber compounds

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Supplementary

Table S1: ANAS data filtered through the metropolitan area of Milano with AADT (annual average daily traffic) values divided by light and heavy vehicles. The highlighted row is the street selected for sampling.

Area	Province	Position	Latitude	Longitude	Street	Km	Heavy vehicles/d	Light vehicles/d
Metropolitan area of MILANO	Bergamo	433	45,789752	9,99024	SS42	53,261	769	11731
	Brescia	452	45,533537	10,403705	SS45BIS	56,095	2093	20694
	Como	1391	46,024357	9,0827	SS340	47,383	61	6992
	Lecco	417	45,902707	9,335747	SS36	59,037	1743	15026
		3488	45,83884	9,39956	SS36	49,305	2576	48500
		10051	45,883128	9,364547	SS36	55,831	1004	29822
	Lodi	153	45,096795	9,68792	SS9	267,682	286	12291
		154	45,271177	9,549577	SS9	291,177	466	7849
	Monza Brianza	303005	45,710323	9,227613	SS36	27,727	3574	46152
		1394	45,523715	8,72775	SS341	12,957	341	7812
		1715	45,34177	8,96651	SS526	16,268	124	3944
	Milano	10037	45,402613	8,972778	SS494	12,351	973	14714
		421	46,161827	9,811223	SS38	32,856	994	15220
		428	46,15578	10,111897	SS39	9,469	127	2640
		10038	46,305892	10,300423	SS38	79,768	423	5597
	Varese	1151	45,930688	8,822505	SS233	65,441	180	11614
		1384	45,643176	8,792637	SS336	5,061	1871	31278
		1502	45,837697	8,775308	SS394	4,701	134	13719
		10033	45,934207	8,775092	SS394	27,275	216	7675

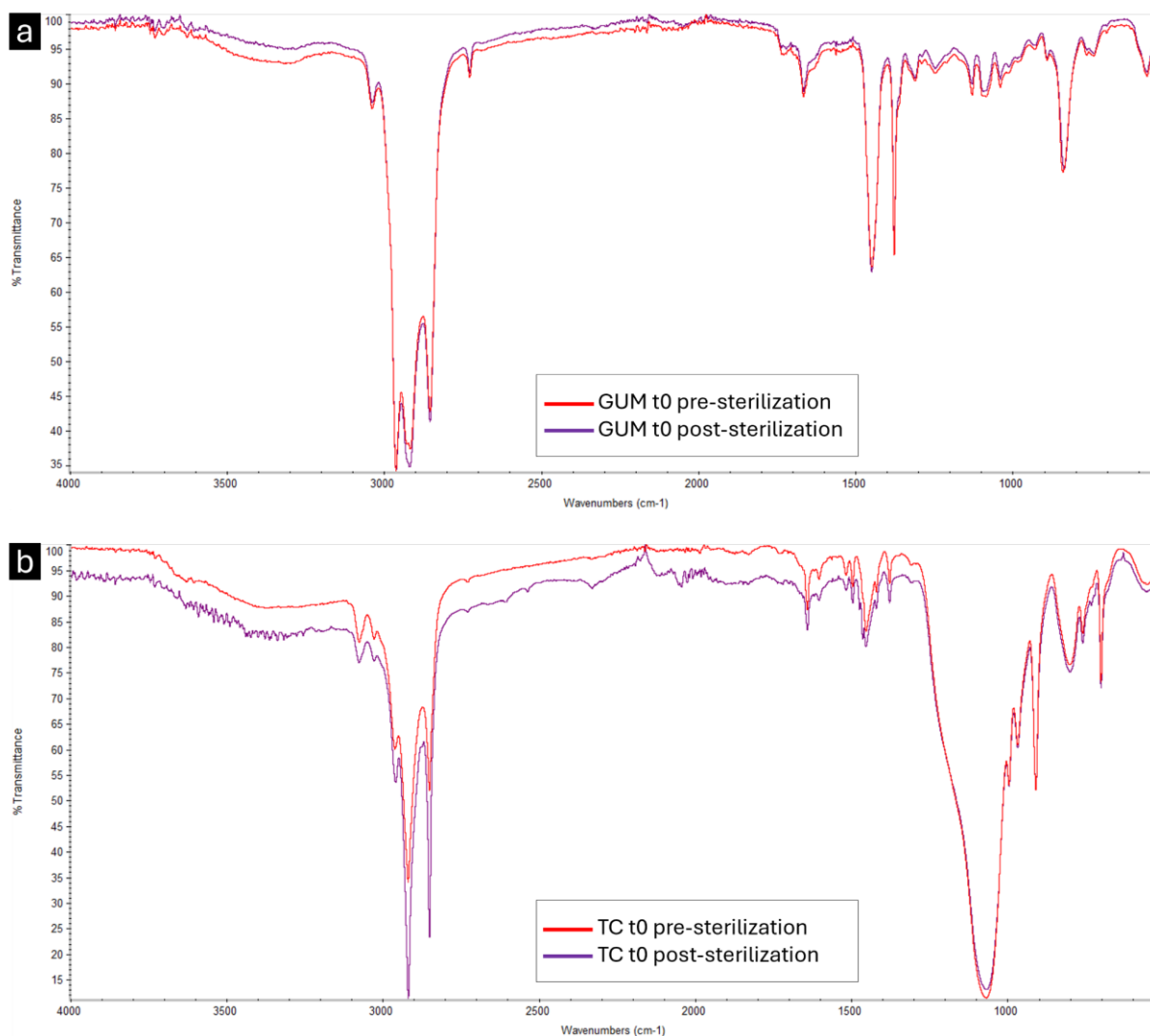


Fig. S1 FT-IR ATR analysis of thin layers of rubber compounds, both for GUM (Panel a) and TC (Panel b), before (red lines) and after (purple lines) combined sterilization treatment (75% EtOH for 1h at 100 rpm, followed by 2h irradiation under UV lamp each side).

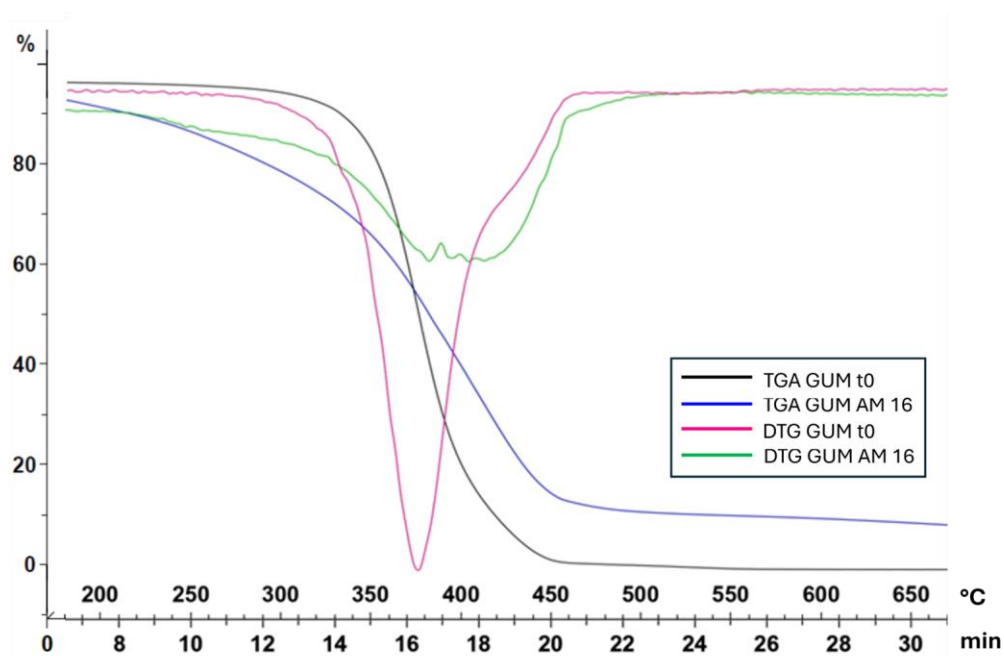


Fig. S2 TGA & DTG analysis of thin layers of rubber compounds (approx. 5 mg) - GUM t0 pristine: TGA (black lines), DTG (pink line); GUM AM 16 photo-aged incubated with MOOs for 16 months: TGA (blue line), DTG (green line) .

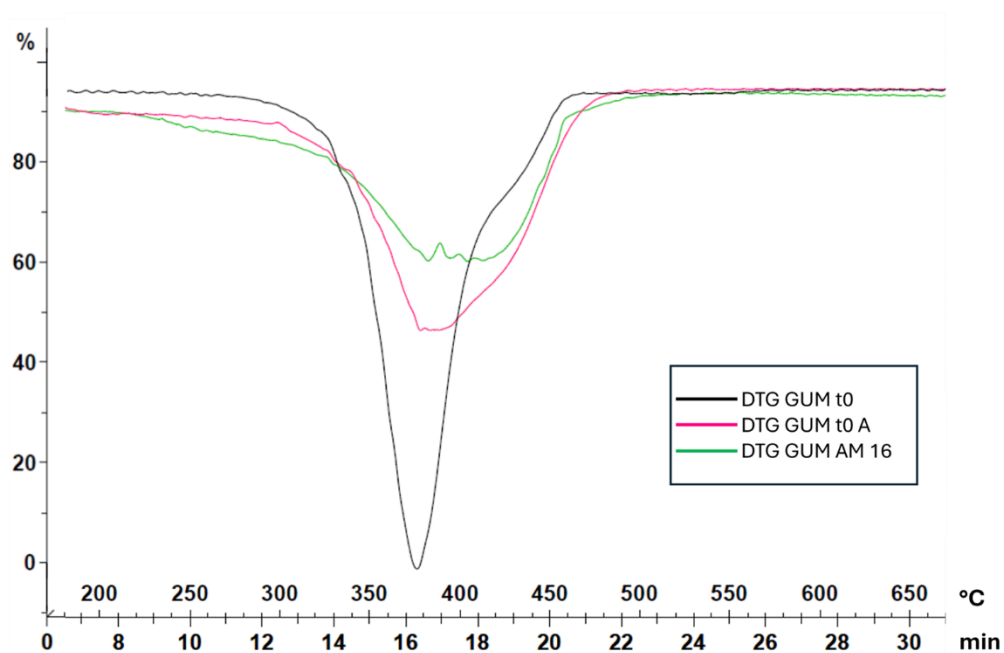


Fig. S3 DTG analysis of thin layers of rubber compounds (approx. 5 mg) - GUM t0 pristine (black line), GUM t0 A photo-aged (pink line), GUM AM 16 photo-aged incubated with MOOs for 16 months (green line).