Table 1. Scores to classify the hazards of substances.

Hazards		Score (S)	Hazards		Score (S)
H200	Physical	3	H318	Health	3
H201	Physical	3	H319	Health	2
H202	Physical	3	H320	Health	2
H203	Physical	3	H330	Health	3
H204:	Physical	2	H331	Health	3
H205	Physical	3	H332	Health	2
H206	Physical	3	H333	Health	2
H207	Physical	3	H334	Health	3
H208	Physical	3	H335	Health	2
H220	Physical	3	H336	Health	2
H221	Physical	2	H340	Health	3
H222	Physical	3	H341	Health	3
H223	Physical	2	H350	Health	3
H224	Physical	3	H351	Health	3
H225	Physical	3	H360	Health	3
H226	Physical	2	H361	Health	3
H227	Physical	2	H362	Health	2
H228 (category 1)	Physical	3	H370	Health	3
H228 (category 2)	Physical	2	H371	Health	3
H229	Physical	2	H372	Health	3
H230	Physical	3	H373	Health	3
H231	Physical	2	H400	Environmental	3
H232	Physical	3	H401	Environmental	3
H240	Physical	3	H402	Environmental	2
H241	Physical	3	H410	Environmental	3
H242 (Type C & D)	Physical	3	H411	Environmental	3
H242 (Type E & F)	Physical	2	H412	Environmental	2
H250	Physical	3	H413	Environmental	2
H251	Physical	3	H420	Environmental	3
H252	Physical	2	EUH001	Physical	3
H260	Physical	3	EUH006	Physical	3
H261(category2)	Physical	3	EUH014	Physical	3
H261(category3)	Physical	2	EUH018	Physical	3
H270	Physical	3	EUH019	Physical	3
H271	Physical	3	EUH029	Health	3
H272(category2)	Physical	3	EUH031	Health	3
H272(category3)	Physical	2	EUH032	Health	3
H280	Physical	2	EUH044	Physical	3
H281	Physical	2	EUH059	Environmental	3
H290	Physical	2	EUH066	Health	2
H300	Health	3	EUH070	Health	3
H301	Health	3	EUH071	Health	3
H302	Health	2	EUH201	Health	3
H303	Health	2	EUH201A	Health	2
H304	Health	3	EUH202	Health	3
H305	Health	2	EUH203	Health	2
H310	Health	3	EUH204	Health	2
H311	Health	3	EUH205	Health	2
H312	Health	2	EUH206	Health	3
H313	Health	2	EUH207	Health	3
H314	Health	3	EUH208	Health	2
H315	Health	2	EUH209	Physical	3
H316	Health	2	EUH209A	Physical	2
H317	Health	2			

Table 2 Scores to classify substances regarding degradability and renewability.

Characteristics	Criteria	Score (S) Green star
Degradability	Not degradable and may not be treated to render the substances degradable to innocuous products	3
	Not degradable but may be treated to render the substances degradable to innocuous products	2
	Degradable and breakable to innocuous products	1
Renewability	Not renewable	3
	Renewable	1

Table 3 Scores (S) to construct the green star.

Green Chemistry Principle	Criteria	S
P1 – Prevention	Waste is innocuous (S=1, Table 1)	3
	Waste involves a moderate hazard to human health and environment (S=2, Table 1, for at least one substance, no substances with S=3)	2
	Waste involves a high hazard to human health and environment (S=3, Table 1, for at least one substance)	1
P2- Atom Economy	Reactions without excess of reagents (≤10%) and without formation of by-products	3
	Reactions without excess of reagents (≤10%) and with formation of by-products	2
	Reactions with excess of reagents (>10%) and without formation of by-products	2
	Reactions with excess of reagents (>10%) and with formation of by-products	1
P3 – Less hazardous chemical synthesis	All substances involved are innocuous (S=1, Table 1)	3
	Substances involved with moderate hazard to human health and environment (S=2,Table 1, for at least one substance, no substances with S=3)	2
	Substances involved with high hazard to human health and environment (S=3, Table 1, for at least one substance)	1
P5 – Safer solvents and auxiliary substances	Solvents and auxiliary substances are not used, but if used are innocuous (S=1, Table 1)	3
	Solvents or/and auxiliary substances are used with moderate hazard to human health and environment (S=2, Table 1, for at least one substance, no substances with S=3)	2
	Solvents or/and auxiliary substances are used with high hazard to human health and environment (S=3, Table 1, for at least one substance)	1
P6 – Increase energy efficiency	Room temperature and pressure	3
	Room pressure and temperature between 0 and 100 ºC when cooling or heating is needed	2
	Pressure different from room pressure and/or temperature > 100 ºC or less than 0 ºC	1
P7 – Use renewable feedstocks	All raw materials/feedstocks are renewable (S=1, Table 2)	3
	At least one raw material/feedstock is renewable, water is not considered (S=1, Table 2)	2
	None of the raw materials/feedstocks are renewable, water is not considered S=3, Table 2)	1
P8 – Reduce derivatives	Without derivatizations or with one step	3
	Only one derivatization or two steps are used	2
	More than one derivatization or more than two steps are used	1
P9 – Catalysts	Catalysts are not used and if used are innocuous (S=1, Table 1)	3
	Catalysts are used with moderate hazard to human health and environment (S=2, Table 1)	2
	Catalysts are used with high hazard to human health and environment (S=3, Table 1)	1
P10 – Design for degradation	All substances involved are degradable and break down to innocuous products (S=1, Table 2)	3
	All substances involved not degradable may be treated to render them degradable to innocuous products (S=2, Table 2)	2
	At least one substance is not degradable nor may be treated to render it degradable to innocuous products (S=3, Table 2)	1
P12 – Safer chemistry for accident prevention	Substances used with low hazard to cause chemical accidents (S=1, Table 1, considering health and physical hazards)	3
	Substances used with moderate hazard to cause chemical accidents (S=2, Table 1, for at least one substance considering health and physical hazards, no substances with S=3)	2
	Substances used with high hazard to cause chemical accidents (S=3, Table 1, for at least one substance considering health and physical hazards)	1