

## 1.0 Aggregated Inventory and Results for nAg Synthesis

Table S1 presents the aggregated inventory data for the nAg synthesis

Table S1: Aggregated Inventory Data for 4600 µg nAg

Input	Quantity
Energy	2.41e-1 kWh
Water	2.42e-2 kWh
Reagent	1.63e-2 kWh
Silver Nitrate	1.21e-2 kWh

Table S2 presents the aggregated impact data for each environmental impact category considered.

Table S2: Aggregate Impact Data for Producing 4600 µg nAg

Impact Category	Units	Energy	Water	Reagent	Silver Nitrate	Total
Ozone depletion	kg CFC-11 eq	2.31E-12	4.34E-12	4.25E-11	7.94E-11	1.29E-10
Global warming	kg CO2 eq	5.07E-05	1.64E-05	3.07E-4	7.95E-04	1.17E-03
Smog	kg O3 eq	2.39E-06	6.51E-07	2.44E-05	1.71E-4	1.98E-04
Acidification	mol H+ eq	1.80E-05	3.31E-06	9.17E-05	8.86E-4	9.99E-04
Eutrophication	kg N eq	1.923E-07	5.67E-06	7.66E-07	5.17E-05	5.83E-05
Carcinogenics	CTUh	2.69E-12	1.72E-12	1.58E-11	4.45E-10	4.66E-10
Non carcinogenics	CTUh	6.13E-12	3.27E-12	3.86E-10	5.98E-09	6.37E-09
Respiratory effects	kg PM10 eq	5.46E-08	1.68E-08	6.06E-07	3.85E-06	4.53E-06
Ecotoxicity	CTUe	4.49E-05	2.42E-05	1.08E-03	2.25E-02	2.36E-02

Table S4 presents the aggregated inventory data for the process of attaching the nAg at the laboratory scale for 1 hospital gown, containing 4600 µg nAg

Table S4: Aggregated Inventory Data to attached 4600 µg nAg to textile

Input	Quantity
Water	3.44 kg
Energy	6.00E-02 kWh
Reagents	47.53 g

Table S5 presents the results of the environmental impacts of attaching the nAg on a laboratory scale

Table S5: Aggregate Impact Data for attaching 4600 µg nAg to textile

Impact	Units	Reagent	Water	Energy	Sum
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category					
Ozone depletion	kg CFC-11 eq	3.56E-09	6.75E-11	2.07E-09	5.70E-09
Global warming	kg CO2 eq	3.24E-02	1.08E-03	4.55E-02	7.90E-02
Smog	kg O3 eq	2.59E-03	5.34E-05	2.15E-03	4.79E-03
Acidification	mol H+ eq	1.02E-02	2.48E-04	1.614E-02	2.66E-02
Eutrophication	kg N eq	8.39E-05	6.61E-06	1.73E-04	2.63E-04
Carcinogenics	CTUh	1.69E-09	1.64E-10	2.42E-09	4.28E-09
Non carcinogenics	CTUh	3.70E-08	3.00E-10	5.50E-09	4.28E-08
Respiratory effects	kg PM10 eq	6.70E-05	1.36E-06	4.90E-05	1.17E-04
Ecotoxicity	CTUe	1.08E-01	2.18E-03	4.03E-02	1.51E-01