Appendix 1. Evidence table

Study reference	Study characteristics	Product characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
Nowack (2012)	SR of three life cycle assessments to identify environmental indicators for procurement decisions of low-value products. Literature search up to 2012 **A**: Schmidt, 2000 **B**: IFEU, 1996 **C**: Ponder, 2009 Study design: LCA Setting and Country: Germany Source of funding and conflicts of interest: Not stated.	Inclusion criteria SR: Sound methodology, verifiability, completeness and actuality. Exclusion criteria SR: Foreign language Three studies included Functional unit (as stated in the SR): **A**: 1 gown **B**: 1 operation **C**: 1 gown	Describe intervention: **A**: Reusable OR textiles (CO/PES PES) **B**: Reusable OR textiles (CO, CO/PES) **C**: Reusable OR textiles (CO/PES)	Describe control: **A**: Single-use OR textiles (Pulp/PES, pulp/PES/PE) **B**: Single-use OR textiles (Pulp/PE/PES) **C**: Single-use OR textiles (PP SMS)	End-point of follow-up: N/A For how many participants were no complete outcome data available? N/A	Climate change (CO_2 footprint/Global Warming Potential (GWP)) **A**: Schmidt (2000) describes only surgical gowns and no surgical drapes. Surgical gowns are not included in the research question of this module. Therefore this study is no longer included in the results. **B**: IFEU (1996) describes the outome measure CO_2 (g) of 30 use cycles (uc) and 75 uc of reusable and single-use drapes. There are three different kind of reusable drapes (cotton, blended fabric and microfiber) compared to single-use non woven drapes. The impact on CO_2 (g) for the reusable cotton drape is 6,037 g CO_2 for 30 uc and 5,075 g CO_2 for 75 uc. For the reusable blended fabric drape this results in 5,110 g CO_2 for 30 uc and 4,154 g CO_2 for 75 uc and for the reusable microfiber drape in 5,940 g CO_2 for 30 uc and 4,716 g CO_2 for 75 uc. The single-use non woven drape results in an impact of 3,886 g CO_2 for 30 uc and 3,886 g CO_2 for 75 uc. **C**: Ponder (2009) describes the outcome measure CO_2 (kg) of 75 use cycles of	Authors conclusion: This review on the existing LCAs available on OR textiles show it is not recommended to base the procurement decision on the existing LCAs. This is due to the variance of methodological strength, incompleteness of data, outdated data, variability of data and complexity. Interpretation of results: The study from IFEU 1996 is outdated, since OR textiles have developed over the years. Next to that, it is not clear how the data is gathered and what impact the different phases of the life cycle have (e.g. production phase, use phase, disposal etc.) and if all the phases are even taken into account. The most recent study from Ponder (2009) suggests the reusable drapes have a lower environmental impact compared to the disposable drape. However, it is still necessary to conduct more research since the authors state the data can substantially differ between countries. In contrast to IFEU (1996), Ponder has not included other scenarios (e.g. different uc or different energy mixes) in the analysis.

Study reference	Study characteristics	Product characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
						reusable (CO/PES) drapes in comparison to 75 use cycles of single-use (PP-SMS) drapes. The CO_2 (kg) for the reusable variant is 5.71 kg CO_2 compared to 20.50 kg CO_2 for the single-use drapes. <u>Waste</u> **B**: IFEU (1996) describes the outome measure waste (g) of 30 use cycles (uc) and 75 uc of reusable and single-use drapes. There are three different kind of reusable drapes (cotton, blended fabric and microfiber) compared to single-use non woven drapes. The waste (g) from the reusable cotton drape is 6,163 g for 30 uc and 4,210 g for 75 uc. For the reusable blended fabric drape this results in 5,830 g for 30 uc and 3,890 g for 75 uc and for the reusable microfiber drape in 7,057 g for 30 uc and 4,672 g for 75 uc. The single-use non woven drape results in 3,735 g for 30 uc and 3,735 g for 75 uc. **C**: Ponder (2009) describes no results on the outcome waste. <u>Water use</u> **B**: IFEU (1996) describes the outome measure water consumption (l) of 30 use cycles (uc) and 75 uc of reusable and single-use	It was unable to pool the data from the different studies included in the review, since they were not comparable. Low quality studies have been excluded based on a quality assessment, as shown in Table 1 of the review.

Study reference	Study characteristics	Product characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
						drapes. There are three different kind of reusable drapes (cotton, blended fabric and microfiber) compared to single-use non woven drapes. The water consumption (l) from the reusable cotton drape is 4,690 l for 30 uc and 1,965 l for 75 uc. For the reusable blended fabric drape this results in 2,891.30 l for 30 uc and 1,241.90 l for 75 uc and for the reusable microfiber drape in 239.4 l for 30 uc and 192.80 l for 75 uc. The single-use non woven drape results in 22.2 l for 30 uc and 22.2 l for 75 uc. **C**: Ponder (2009) describes the outcome measure water consumption (kg) of 75 use cycles of reusable (CO/PES) drapes in comparison to 75 use cycles of single-use (PP-SMS) drapes. The water consumption (kg) for the reusable variant is 1,373.83 kg compared to 0.00 kg for the single-use drapes. <u>Energy use</u> **B**: IFEU (1996) describes the outome measure energy use as energy consumption (MJ) of 30 use cycles (uc) and 75 uc of reusable and single-use drapes. There are three different kind of reusable drapes (cotton, blended fabric and microfiber) compared to single-use non woven drapes. The energy	

Study reference	Study characteristics	Product characteristics	Intervention (I)	Comparison / control (C)	Follow-up	Outcome measures and effect size	Comments
						consumption (MJ) from the reusable cotton drape is 99,314 MJ for 30 uc and 83,567 MJ for 75 uc. For the reusable blended fabric drape this results in 94,174 MJ for 30 uc and 72,878 MJ for 75 uc and for the reusable microfiber drape in 111,616 MJ for 30 uc and 85,527 MJ for 75 uc. The single-use non woven drape results in 96,428 MJ for 30 uc and 96,428 MJ for 75 uc. **C**: Ponder (2009) describes the outcome measure energy use as net energy input (input-recovery) in MJ of 75 use cycles of reusable (CO/PES) drapes in comparison to 75 use cycles of single-use (PP-SMS) drapes. The net energy input (input-recovery) for the reusable variant is 65.05 MJ compared to 225.95 MJ for the single-use drapes.	