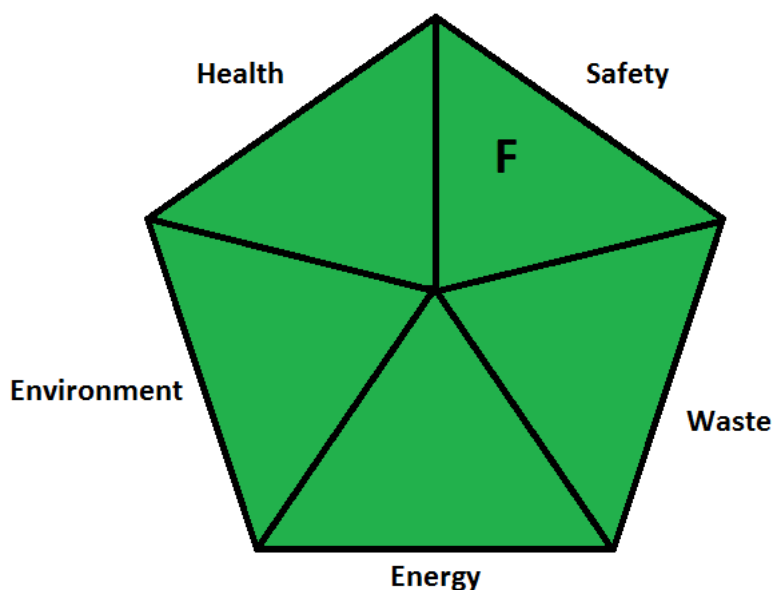


Supplementary Material



| Category | Green | Yellow | Red |
|-----------------------------|---|--|--|
| Health Hazard | Slightly toxic, slight irritant; NFPA health hazard score is 0 or 1. | Moderately toxic; could cause temporary incapacitation; NFPA = 2 or 3. | Serious injury on short term exposure; known or suspected small animal carcinogen; NFPA = 4. |
| Safety Hazard | Highest NFPA flammability, instability score of 0 or 1. No special hazards. | Highest NFPA flammability or instability score is 2 or 3, or a special hazard is used. | Highest NFPA flammability or instability score is 4. |
| Environmental Hazard | If less than 50 g of environmental hazards used. | If more than 50 g but less than 250 g used. | If more than 250 g used. |
| Energy | Wet chemistry method such as titration. Very little solvent evaporation. | Instrumental method such as GC, HPLC; moderate solvent evaporation. | Instrumental method such as GC-MS; high volume of solvent evaporated. |
| Waste amount | Total waste for processing one sample ≤ 50 g. | Total waste ≤ 250 g. | Total waste > 250 g. |

Table S1. Green assessment profile proposed by Raynie et al. [1]

References

D. Raynie, J. Driver, Green Assessment of Chemical Methods, In: 13th Annual Green Chemistry and Engineering Conference, *Maryland*, 2009.

Table S2: Green analytical procedure Index parameters [2]

| Category | Green | Yellow | Red |
|---|---|--|--|
| Sample preparation | | | |
| Collection (1) | In-line | On-line or at-line | Off-line |
| Preservation (2) | None | Chemical or physical | Physico-chemical |
| Transport (3) | None | Required | – |
| Storage (4) | None | Under normal conditions | Under special conditions |
| Type of method: direct or indirect (5) | No sample preparation | Simple procedures, eg. filtration, decantation | Extraction required |
| Scale of extraction (6) | Nano-extraction | Micro-extraction | Macro-extraction |
| Solvents/reagents used (7) | Solvent-free methods | Green solvents/reagents used | Non-green solvents/reagents used |
| Additional treatments (8) | None | Simple treatments (clean up, solvent removal, etc.) | Advanced treatments (derivatization, mineralization, etc.) |
| Reagent and solvents | | | |
| Amount (9) | < 10 mL (< 10 g) | 10–100 mL (10–100 g) | > 100 mL (> 100 g) |
| Health hazard (10) | Slightly toxic, slight irritant; NFPA health hazard score = 0 or 1. | Moderately toxic; could cause temporary incapacitation; NFPA = 2 or 3. | Serious injury on short-term exposure; known or suspected small animal carcinogen; NFPA = 4. |
| Safety hazard (11) | Highest NFPA flammability or instability score of 0 or 1. No special hazards. | Highest NFPA flammability or instability score of 2 or 3, or a special hazard is used. | Highest NFPA flammability or instability score of 4. |
| Instrumentation | | | |
| Energy (12) | ≤0.1 kWh per sample | ≤1.5 kWh per sample | > 1.5 kWh per sample |
| Occupational hazard (13) | Hermetic sealing of analytical process | – | Emission of vapours to the atmosphere |
| Waste (14) | < 1 mL (< 1 g) | 1–10 mL (1–10 g) | > 10 mL (< 10 g) |
| Waste treatment (15) | Recycling | Degradation, passivation | No treatment |
| ADDITIONAL MARK: QUANTIFICATION | | | |
| Circle in the middle of GAPI: <i>Procedure for qualification and quantification</i> | No circle in the middle of GAPI: <i>Procedure only for qualification</i> | | |
| NFPA: National Fire Protection Association | | | |

References

- 1 Van Aken, K.; Streckowski, L.; Patiny, L. EcoScale, A semi-quantitative tool to select an organic preparation based on economical and ecological parameters. *Beilstein J. Org. Chem.* **2006**, *2*, 1–7.
- 2 Płotka-Wasyłka, J. A new tool for the evaluation of the analytical procedure: Green Analytical Procedure Index. *Talanta* **2018**, *181*, 204–209.