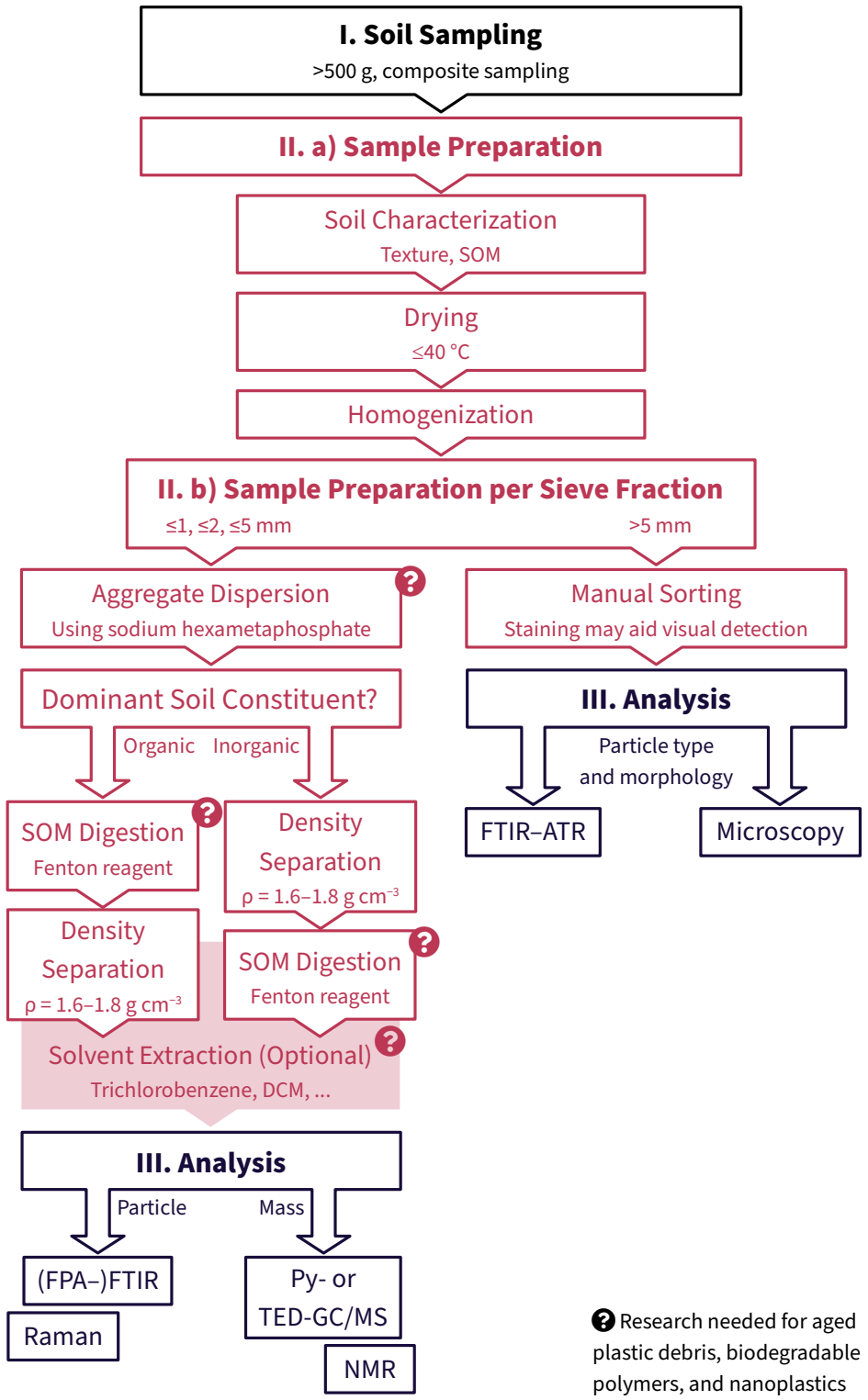
I. Soil Sampling
>500 g, composite sampling
II. a) Sample Preparation
Soil Characterization
Texture, SOM
Drying
≤40 °C
Homogenization
II. b) Sample Preparation per Sieve Fraction
≤1, ≤2, ≤5 mm
>5 mm
Aggregate Dispersion
Using sodium hexametaphosphate
Dominant Soil Constituent?
Organic
Inorganic
SOM Digestion
Fenton reagent
Density Separation
ρ = 1.6–1.8 g cm⁻³
Density Separation
ρ = 1.6–1.8 g cm⁻³
SOM Digestion
Fenton reagent
Solvent Extraction (Optional)
Trichlorobenzene, DCM, ...
III. Analysis
Particle
Mass
(FPA–)FTIR
Raman
Py- or TED-GC/MS
NMR
Manual Sorting
Staining may aid visual detection
III. Analysis
Particle type and morphology
FTIR–ATR
Microscopy
? Research needed for aged plastic debris, biodegradable polymers, and nanoplastics