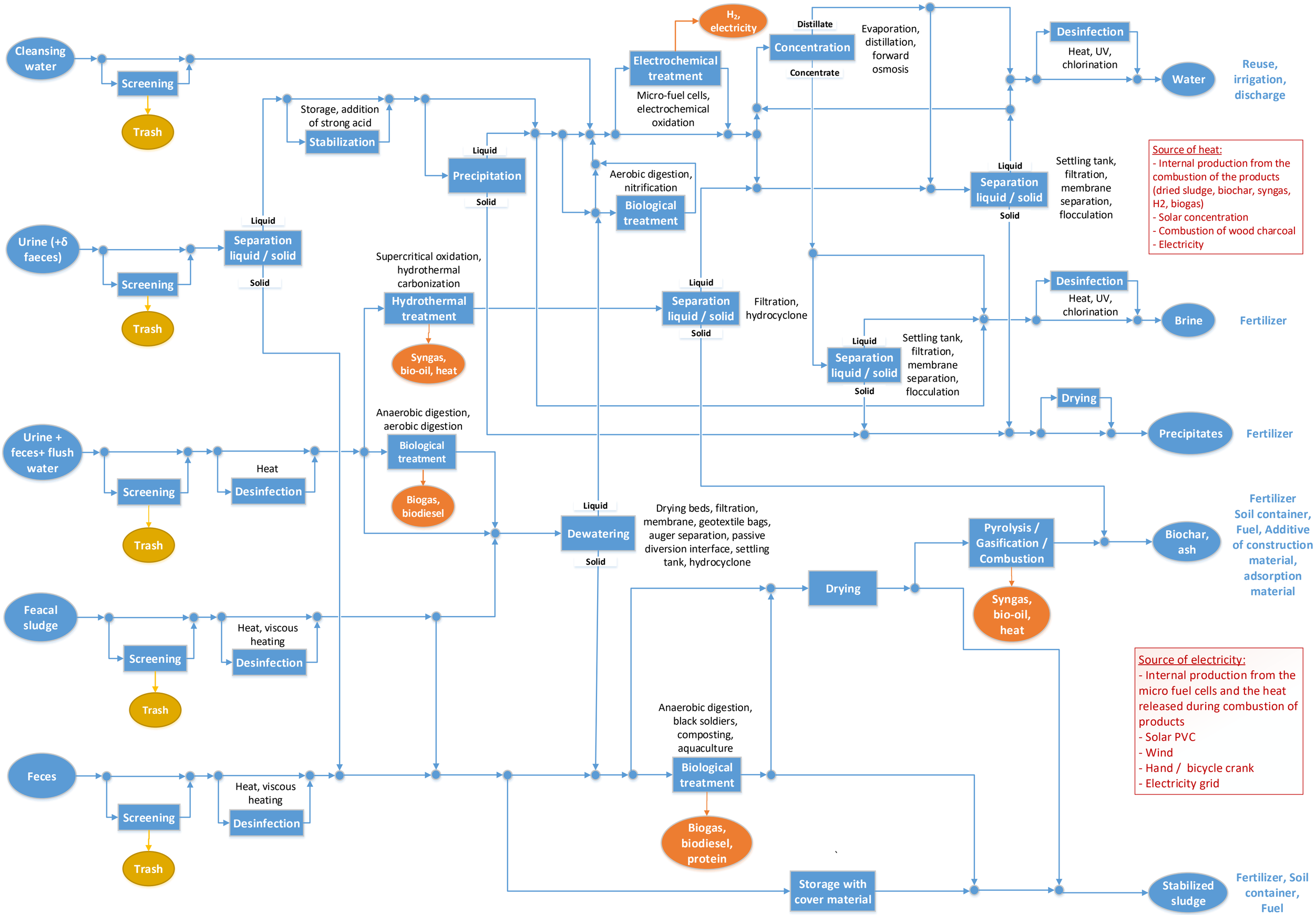
Cleansing water
Screening
Trash
Urine (+δ faeces)
Screening
Trash
Urine + feces+ flush water
Screening
Trash
Feacal sludge
Screening
Trash
Feces
Screening
Trash
Storage, addition of strong acid
Stabilization
Liquid
Separation liquid / solid
Solid
Heat
Desinfection
Heat, viscous heating
Desinfection
Heat, viscous heating
Desinfection
Liquid
Precipitation
Solid
Supercritical oxidation, hydrothermal carbonization
Hydrothermal treatment
Syngas, bio-oil, heat
Anaerobic digestion, aerobic digestion
Biological treatment
Biogas, biodiesel
Liquid
Dewatering
Solid
Drying beds, filtration, membrane, geotextile bags, auger separation, passive diversion interface, settling tank, hydrocyclone
Electrochemical treatment
Micro-fuel cells, electrochemical oxidation
H2, electricity
Aerobic digestion, nitrification
Biological treatment
Distillate
Concentration
Concentrate
Evaporation, distillation, forward osmosis
Liquid
Separation liquid / solid
Solid
Filtration, hydrocyclone
Liquid
Separation liquid / solid
Solid
Settling tank, filtration, membrane separation, flocculation
Liquid
Separation liquid / solid
Solid
Settling tank, filtration, membrane separation, flocculation
Desinfection
Heat, UV, chlorination
Water
Reuse, irrigation, discharge
Desinfection
Heat, UV, chlorination
Brine
Fertilizer
Drying
Precipitates
Fertilizer
Pyrolysis / Gasification / Combustion
Syngas, bio-oil, heat
Biochar, ash
Fertilizer Soil container, Fuel, Additive of construction material, adsorption material
Drying
Anaerobic digestion, black soldiers, composting, aquaculture
Biological treatment
Biogas, biodiesel, protein
Storage with cover material
Stabilized sludge
Fertilizer, Soil container, Fuel
Source of heat:
- Internal production from the combustion of the products (dried sludge, biochar, syngas, H2, biogas)
- Solar concentration
- Combustion of wood charcoal
- Electricity
Source of electricity:
- Internal production from the micro fuel cells and the heat released during combustion of products
- Solar PVC
- Wind
- Hand / bicycle crank
- Electricity grid