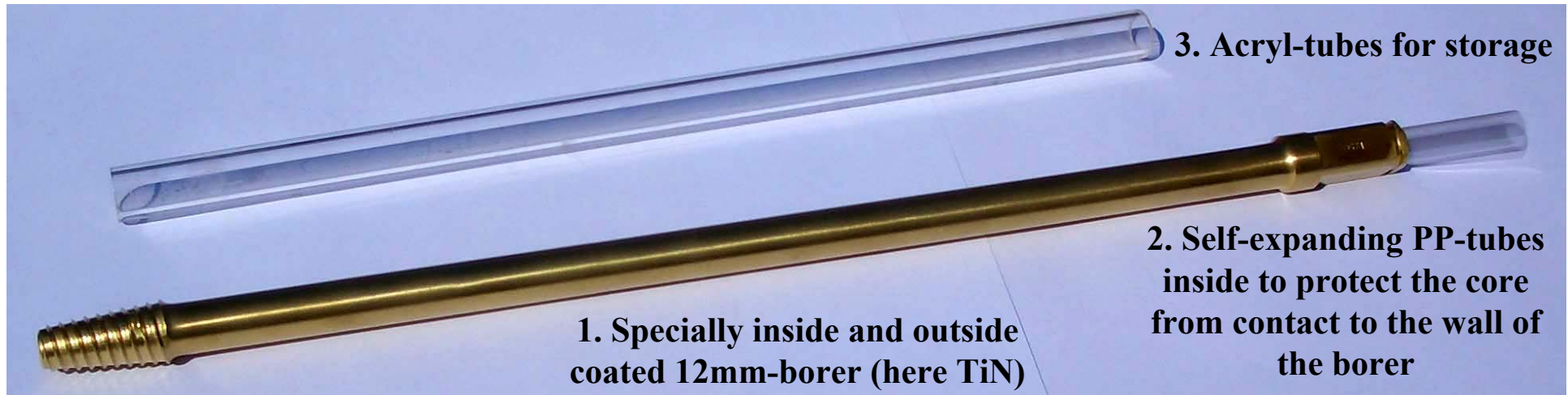


Chemical analysis of the tree rings

- Ringporous, deciduous trees (oak, ash) because of water transport in the last formed xylem ring
- Different cores for ring width and chemical analysis
- Special borer and core handling to avoid contamination and shift of elements in the process of drying



4 Fast extracting

5 Immediate deep-freezing of the core and special trimming tools

6 Freeze-drying in the lab

7 Analysis only of the inner parts of the core

Elements: ICP-MS, XRFA, element analyser

54 (usually ~25-35 detectable depending on concentration)

Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hg, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, N, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, S, Sb, Se, Sm, Sn, Sr, Tb, Th, Ti, Tl, Tm, U, V, W, Yb, Zn, Zr

Isotopic composition: $\delta^{34}\text{S}$, $\delta^{15}\text{N}$, Pb