“Like” means “similar to,” not necessarily “identical to.”

Do not use *like* when you mean *such as* or *for example* (e.g.).

“The student will practice each measurement technique on well-known and well-characterized materials, *like* lead, aluminum, and silver.”

Now for the question—is the student going to practice on Pb, Al, and Ag samples?
No. She’s not going to practice on those specific materials; she’s going to practice on materials *like* them. But we have no idea what those materials might be, or how they are “like” the named materials (ductility, low toxicity, wide availability...).

*Like EXcludes.*

*Such as INcludes.*