Given a group $\Gamma$, we will discuss properties of systems of equations over $\Gamma$. More specifically, a group $\Gamma$ is called Equationally Noetherian if every set of equations is equivalent to a finite subset of it. We will present this notion and discuss its connection to geometric properties of $\Gamma$, namely, hyperbolic structures on which $\Gamma$ acts.

We will present a new result which shows that if $\Gamma$ is strictly acylindrical colorable hierarchically hyperbolic group, then it is equationally notherian.