It is not often that philosophical and in particular metaphysical questions get decided on empirical grounds. Even so, some such questions lend themselves more readily than others to empirical inquiry. One question that may qualify for such a treatment is whether natural science supposes the existence of intrinsic properties. Through a series of thought-experiments, an argument is constructed to the effect that this is indeed the case. That same argument is then scrutinised. Since the scrutiny focuses on the practical realisability of the thought-experiments, the fate of intrinsic properties becomes an empirically decidable matter. What is more, in the process of both constructing the argument as well as motivating the empirical decidability of the question, three desiderata that any adequate conception of intrinsicality must meet are uncovered.