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Borel complexity of isomorphism for theories with many types

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If E is a Borel equivalence relation with countably many classes, then there is an infinitary sentence ϕ such that E is Borel bi-reducible to the isomorphism relation for ϕ. Kechris and Hjorth asked if the same was true for first order theories. We show that if a theory has uncountably many types, then the isomorphism relation is more complicated than any Borel equivalence relation with countably many classes.