Ancestry results for identical twins illustrate flaws in consumer genetic testing

One set of identical twins, two different ancestry profiles.

At least that's the suggestion from one of the world's largest ancestry DNA testing companies.

[Spring 2018], Marketplace host Charlsie Agro and her twin sister, Carly, bought home kits from AncestryDNA, MyHeritage, 23andMe, FamilyTreeDNA and Living DNA, and mailed samples of their DNA to each company for analysis.

Despite having virtually identical DNA, the twins did not receive matching results from any of the companies. In most cases, the results from the same company traced each sister's ancestry to the same parts of the world — albeit by varying percentages.

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Marketplace sent the results from all five companies to [computational biologist Mark] Gerstein's team for analysis. He says any results the Agro twins received from the same DNA testing company should have been identical.

And there's a simple reason for that: The raw data collected from both sisters' DNA is nearly exactly the same.

"It's shockingly similar," he said.

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When asked why the twins didn't get the same results given the fact their DNA is so similar, 23andMe told Marketplace in an email that even those minor variations can lead its algorithm to assign slightly different ancestry estimates.

The company said it approaches the development of its tools and reports with scientific rigour, but admits its results are "statistical estimates."

Read full, original post: Twins get some 'mystifying' results when they put 5 DNA ancestry kits to the test