Glyphosate-tolerant alfalfa is compositionally equivalent to conventional alfalfa (Medicago sativa L.).

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Abstract
Glyphosate-tolerant alfalfa (GTA) was developed to withstand over-the-top applications of glyphosate, the active ingredient in Roundup agricultural herbicides. As a part of the safety assessment, GTA (designated J101 x J163) was grown under controlled field conditions at geographically diverse locations within the United States during the 2001 and 2003 field seasons along with control and other conventional alfalfa varieties for compositional assessment. Field trials were conducted using a randomized complete block design with four replication blocks at each site. Alfalfa forage was harvested at the late bud to early bloom stage from each plot at five field sites in 2001 (establishment year) and from four field sites in 2003 (third year of stand). The concentration of proximate constituents, fibers, amino acids, coumestrol, and minerals in the forage was measured. The results showed that the forage from GTA J101 x J163 is compositionally equivalent to forage from the control and conventional alfalfa varieties.