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ORIGINAL ARTICLE

# Effect of condensed tannin ingestion in sheep and goat parotid saliva proteome

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Article first published online: 29 SEP 2010

DOI: 10.1111/j.1439-0396.2010.01055.x

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Issue



## Journal of Animal Physiology and Animal Nutrition

Volume 95, Issue 3, pages 304–312, June 2011

Additional Information

### How to Cite

Lamy, E., da Costa, G., Santos, R., Capela e Silva, F., Potes, J., Pereira, A., Coelho, A. V. and Sales Baptista, E. (2011), Effect of condensed tannin ingestion in sheep and goat parotid saliva proteome. *Journal of Animal Physiology and Animal Nutrition*, 95: 304–312. doi: 10.1111/j.1439-0396.2010.01055.x

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## Publication History

1. Issue published online: 6 APR 2011
2. Article first published online: 29 SEP 2010
3. Received: 6 January 2010; accepted: 17 June 2010

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### Keywords:

condensed tannin; goats (*Capra hircus*); quebracho; parotid saliva proteome; sheep (*Ovis aries*)

## Summary

Saliva appears as a defence mechanism, against potential negative effects of tannins, in some species of animals which have to deal with these plant secondary metabolites in their regular diets. This study was carried out to investigate changes in parotid saliva protein profiles of sheep (*Ovis aries*) and goats (*Capra hircus*), induced by condensed tannin ingestion. Five Merino sheep and five Serpentina goats were maintained on a quebracho tannin enriched diet for 10 days. Saliva was collected through catheters inserted on parotid ducts and salivary proteins were separated by two-dimensional gel electrophoresis. Matrix-assisted Laser desorption ionization – time of flight (MALDI-TOF) and liquid chromatography tandem mass spectrometry (LC-MS/MS) were used to identify the proteins whose expression levels changed after tannin consumption. Although no new proteins appeared, quebracho tannin consumption increased saliva total protein concentration and produced changes in the proteome of both species. While some proteins were similarly altered in both species parotid salivary protein profile, sheep and goats also presented species-specific differences in response to tannin consumption.

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