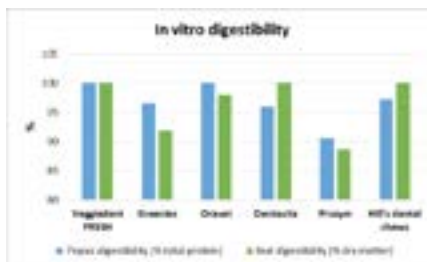


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Evaluation of the *in vitro* digestibility of Veggiedent® FR3SH™ and five other dental chews for dogsCeline S Nicolas
Virbac group, France

Dental chews are recommended by veterinary dentists¹ as home dental care to help maintain teeth clean. Safety and digestibility of these chews is, however, a major concern. *In vitro* digestibility of the following 6 dental chews was investigated in an independent lab: Veggiedent® FR3SH™ (Virbac), Greenies™ Fresh (Mars), Oravet™ (Merial), Dentastix™ (Mars), Prozym® sticks (Ceva) and Hill's® Prescription Diet® Dental Care Chews (Hill's). The humidity level, protein content (Kjeldahl method), *in vitro* pepsic digestibility (sample heated for 48 hours at 40°C in a solution of pepsin hydrochloride²) and ileal digestibility as described by Boisen et al.³ (first incubation with a pepsin solution, pH2 for 6h to mimic gastric digestion and second with a pancreatin solution, pH 6.8 for 18h to mimic small intestinal digestion) were evaluated. Results are expressed as the % of nitrogen content (protein) dissolved (for pepsic digestibility) and as the % of dry matter dissolved (ileal digestibility). The humidity level ranged between 9.8% and 16.1% with a median of 13.5% and the protein content ranged between 6.5% and 43.1% of crude matter with a median of 15.55%. The results for pepsic and ileal digestibility were respectively of 100% and 100% for Veggiedent® FR3SH™; 96.5% and 91.8% for Greenies™, 100% and 98% for Oravet™, 96% and 100% for Dentastix™, 90.5% and 88.7% for Prozym® sticks and 97.2% and 100% for Hill's® Prescription Diet® dental care chews. Veggiedent® FR3SH™ is therefore totally digestible, as assessed by *in vitro* reference methods.

**Recent Publications**

1. Dramard V et al. (2018) Effect of l-theanine tablets in reducing stress-related emotional signs in cats: an open-label field study. *Ir Vet J*. 71:21.
2. Almeras T et al. (2017) Comparative efficacy of the Leucofeligen™ FeLV/RCP and Purevax™ RCP FeLV vaccines against infection with circulating feline Calicivirus. *BMC Vet Res*. 13(1):300.
3. Wood CM et al. (2017) Prevalence and influence of cys407* Grm2 mutation in Hannover-derived Wistar rats: mGlu2 receptor loss links to alcohol intake, risk taking and emotional behaviour. *Neuropharmacology*. 115:128-138.

Biography

Celine S Nicolas graduated in Veterinary Medicine and as a PhD from the University of Nantes (France). She then worked as a Post-doctoral fellow and Research Assistant at the University of Bristol (UK) for 5 years and at the University of Nice (France) for 2 years. She has published several articles in reputed journals and joined Virbac in 2016.

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