



new C.E.T.[®]
VEGGIEDENT[®]
FR3SH[™]

Technical presentation

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- Veggiedent FR3SH: the same great features as Veggiedent
 - A healthy formula
 - An innovative shape
 - Proven by science
- FR3SH technology: what are we talking about ?
 - Pomegranate to address oral causes
 - Erythritol to cool and freshen
 - Inulin to address digestive causes
- Veggiedent FR3SH: clinically proven in dogs
 - A safe product for dogs
 - A product dogs love to eat
 - A product which decreases bad breath of dogs



The same great features as Veggiedent

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A healthy formula

- No ingredient from animal origin

COMPOSITION

Maize starch, Glycerine, Soya protein concentrate, Rice flour, Beer yeast, Sorbitol, Maize cobs [+Polyol (Erythritol), Chicory inulin, Pomegranate concentrate].

- High quality ingredients
 - No Genetically Modified corns (non-GMO certified)
 - No artificial ingredients
 - No wheat gluten
 - Moderate level of calories (low fat content)

ANALYTICAL CONSTITUANTS

Crude proteins 19,0 %; crude ash 1,8 %; crude fiber 1,3 %; crude fat 0,9 %.

CALORIE CONTENT (ME – CALCULATED)
24 kcal/chew (3,000 kcal/kg)

GUARANTEED ANALYSIS (PER CHEW)

Crude protein (min.).....	17.0 %
Crude fat (min.).....	0.4 %
Crude fiber (max.).....	2.0 %
Moisture (max.).....	15.0 %
Ash (max.).....	2.0 %

STORAGE: Store in a dry place at room temperature.



A healthy formula

■ Analytical analysis

	Veggedient FR3SH
Crude proteins (g/100g)	19
Crude fiber (g/100g)	1.3
Crude fat (g/100g)	0.9
Crude ash (g/100g)	1,8
Humidity (g/100g)	12.2
Energy calculation (kCal/100g)	300
Sodium (mg/kg)	2819*
Calcium (mg/kg)	473*
Phosphore (mg/kg)	2089*
Magnésium (mg/kg)	425*
Zinc (mg/kg)	11*

■ Energy = 7-8% of daily energy needs

5kg dog: 1XS chew = 24kCal - E = 367 kCal/d → 6.5%
10kg dog: 1S chew = 48kCal - E = 584 kCal/d → 8%
20kg dog: 1M chew = 75kCal - E = 929 kCal/d → 8%
40kg dog: 1L chew = 105kCal - E = 1478 kCal/d → 7%

Energy need = $0.8 \times 156 \times BW^{0.67}$
Adult, neutered dog, normal activity

Energy calculation (kCal/100g) = % crude protein x 3,5 + % crude fat x 8,5 + % NFE x 3,5
(NFE = 100- humidity - crude fat - crude protein - ash – cellulose)

* Mean of 4 analysis

Innovative shape

- Facilitates prehension
- Allows the chew to go in the parts of the mouth that are harder to reach for chews with a more classic shape
- Enhances mechanical action of chewing:



Z-SHAPE

- 1/ The Z-shape enhances the contact between the chew & the teeth thanks to the edges of the chew → Mechanical cleaning of the teeth
- 2/ The chew is "hydrated" by the saliva of the dogs → Edges of the chew are softened and thus act as a soft scraper

Proven by science

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■ Efficacy

- In toy breeds
- In Beagle

■ Palatability



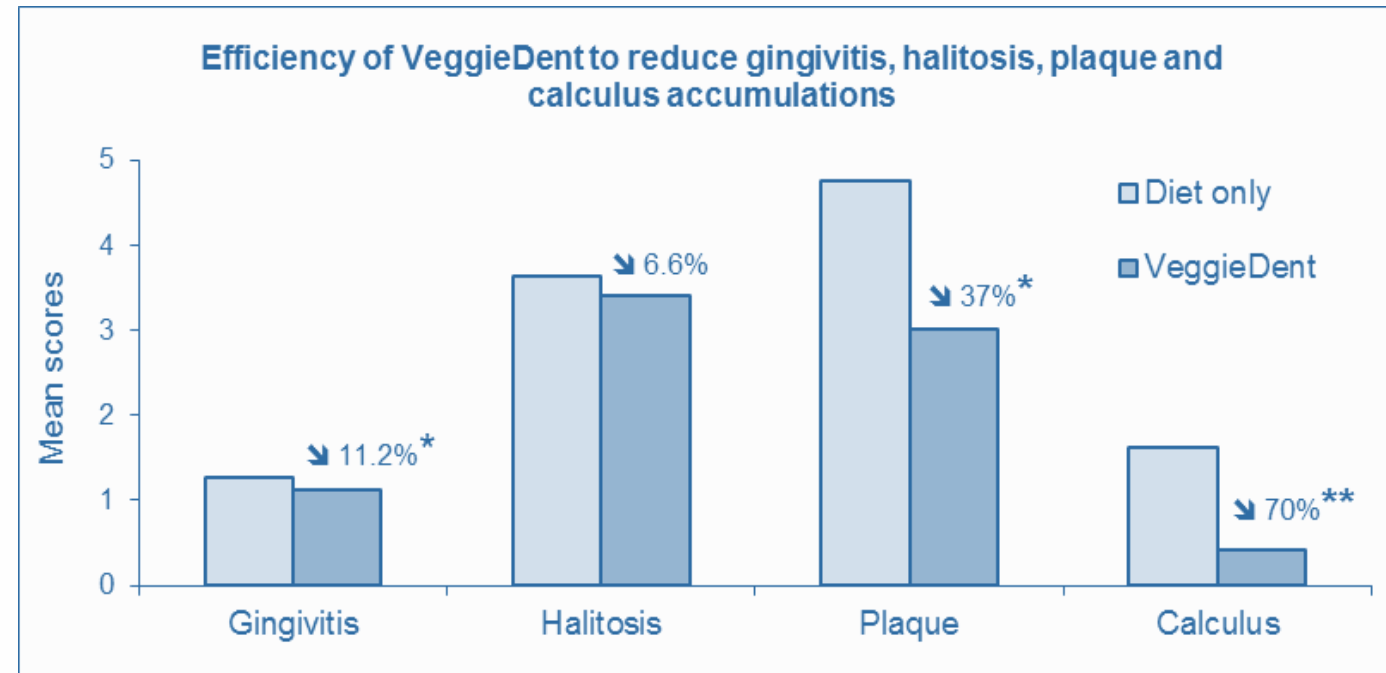
Shaping the future of animal health



Proven by science – efficacy in toy breeds dogs

■ Results:

- Gingivitis reduced: 11.3% ($p=0.0137$)
- Plaque reduced: 37.0% ($p=0.014$)
- Calculus reduced: 70.0% ($p<0.001$)
- Halitosis reduced: 6.6% ($p=0.41$)



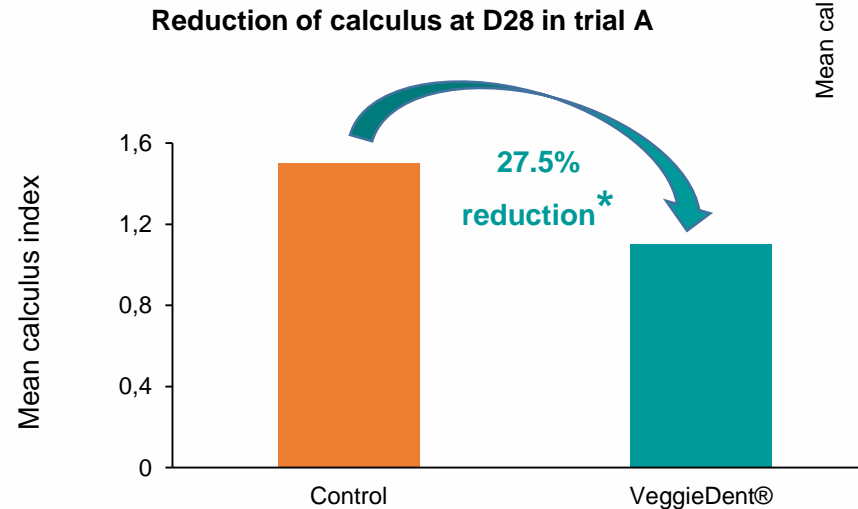
Daily administration of VeggieDent™ Chew helps to improve canine oral health

Proven by science – efficacy in beagles

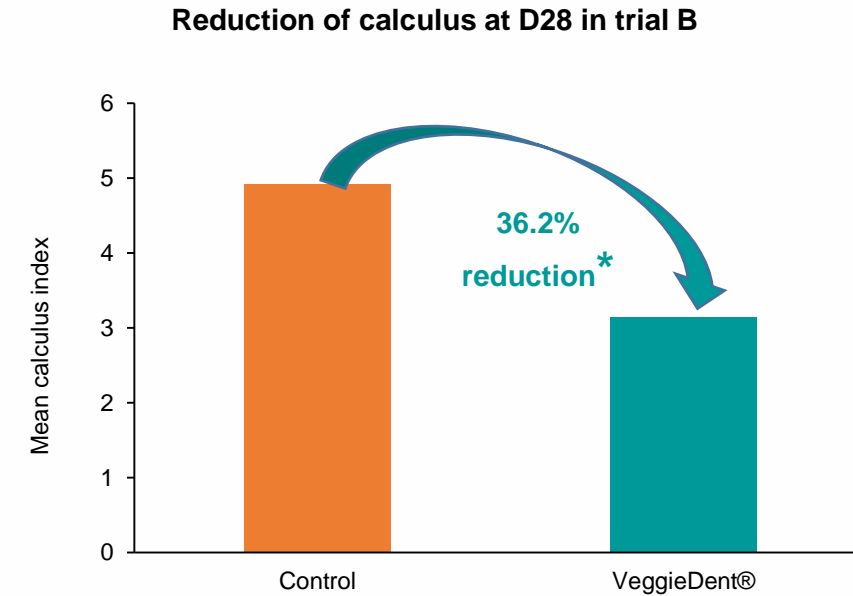
■ Study design:

- 2 trials (A and B) with 30 and 40 healthy adult beagle dogs
- D0: Teeth scaled and polished for all dogs
- 1 tested chew per day for 28 days or nothing
- D28: calculus indices scored

Daily use of VEGGIEDENT[®] in dogs is associated with a significant prevention in tartar formation after 28 days.



* $p < 0,05$



Proven by science – VOHC seal

- Same matrix = VOHC seal on tartar maintained



Proven by science - palatability

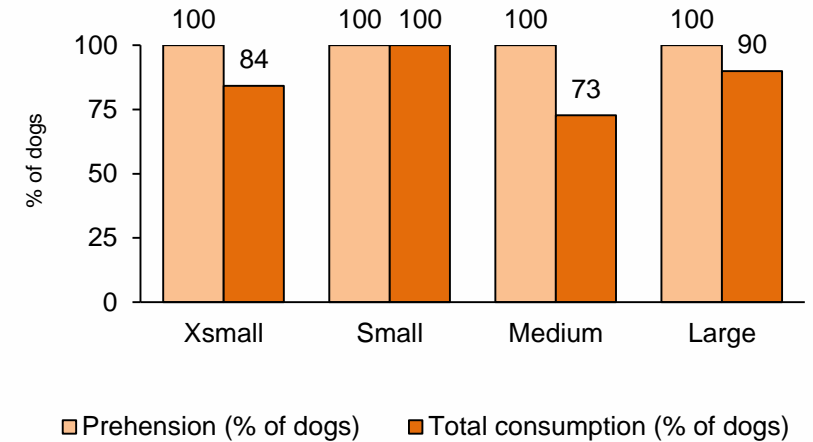
■ Palatability

- Animals:
 - 38 adult toy-breed dogs (<7.9kg)+ 35 adult dogs of various sizes
- One chew offered to each dog, according to its body-weight (BW):
 - XS (mean BW = 6.0kg [2.6 – 7.9])
 - S (mean BW = 6.4kg [3 – 9.9kg])
 - M (mean BW =19.3kg [5.9 – 36kg])
 - L (mean BW =31.79kg [17.8 – 39.5kg])
- Parameters assessed:
 - prehension (take the product spontaneously into the mouth)
 - total consumption (swallow >95% of the quantity of product offered)
 - chewing time

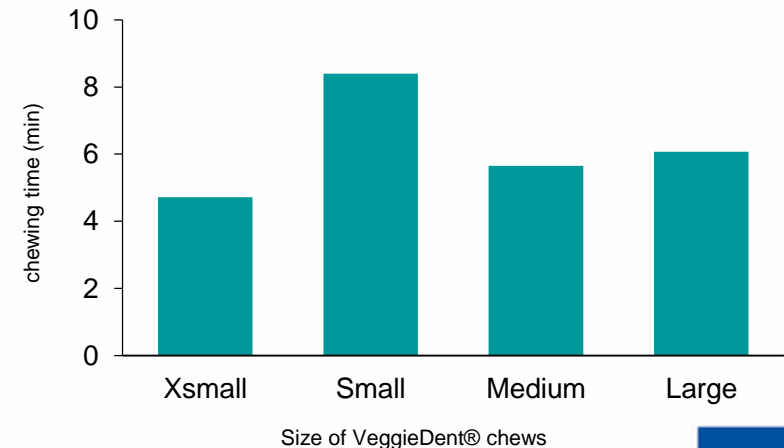
The good prehension rate and the high total consumption rate indicate that all sizes of VeggieDent chews are palatable for dogs.

The long chewing times measured ensure the sustained mechanical action of VeggieDent

Prehension and total consumption of VeggieDent[™]



Chewing time of VeggieDent[™]



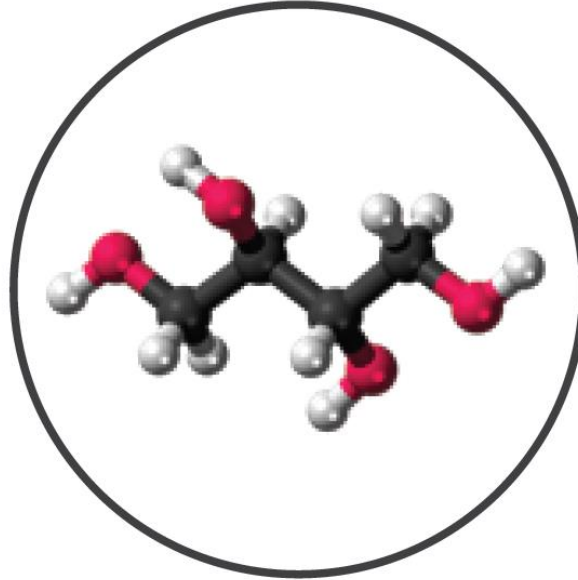


FR3SH™ Technology

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Pomegranate



Erythritol



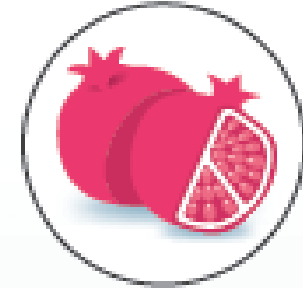
Inulin

Fr3sh technology

■ 3 ingredients:

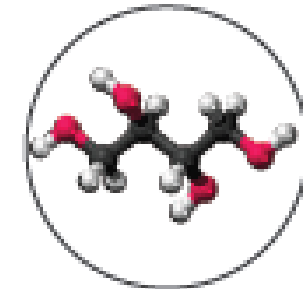
■ Pomegranate

- Biological activities on the oral bacterial balance and plaque
 - Antioxydant
- = reduction of bad breath from oral origin



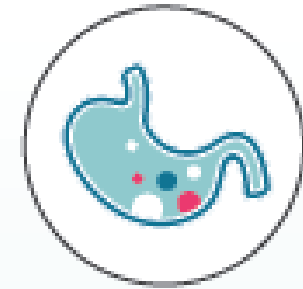
■ Erythritol

- Cooling effect in the mouth (endothermic properties)
 - Control of bacterial growth
- = Cooling effect + improves dental health



■ Inulin

- Action on intestinal balance
 - Reduction of digestive foul odors
- = reduction of bad breath from digestive origin





VEGGIEDENT® FR3SH™ Studies

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Safety studies

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- No product-related clinical signs or gastro-intestinal disorders.
- No change in food consumption, body weight and rectal temperature
- No impact on hematology and blood biochemistry parameters

When VeggieDent FR3SH™ chews were given up to 5 times the recommended dose for a 28-day administration period

■ Study design

Group	Group 1 (4 dogs)	Group 2 (8 dogs)	Group 3 (7+1* dogs)
Doses	Control	1 chew/day for 28 days	5 chews/day for 28 days

Complete clinical examination once a week.

Body weight was measured twice a week.

Food consumption and feces examination (scoring) daily.

Hematology and blood biochemistry on D-14 and D28

* one female did not eat 5 chews, 9 days out of 28

VeggieDent FR3SH™ chews for dogs are well-tolerated at 1 and 5 times the recommended dose, when given by spontaneous oral ingestion during 28 days to adult dogs



Palatability studies

Palatability / acceptability of VeggieDent Fr3sh

FR3SH™

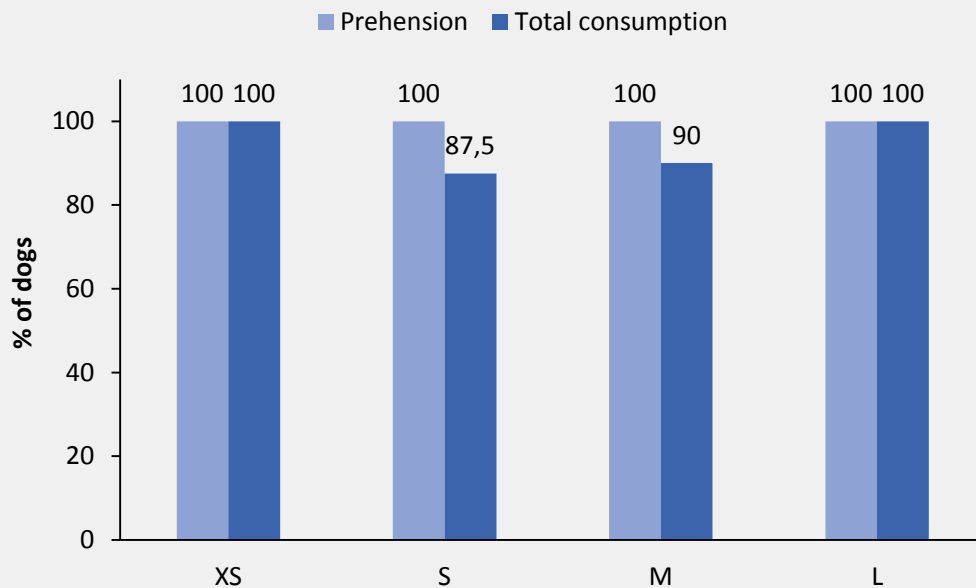
■ Study design

Group	N	Protocol
Dogs < 5 kg body weight (BW)	4	1 VeggieDent® FR3SH™ XSmall
Dogs between 5 - 10 kg BW	8	1 VeggieDent® FR3SH™ Small
Dogs between 10 - 30 kg BW	20	1 VeggieDent® FR3SH™ Medium
Dogs between > 30 kg BW	5	1 VeggieDent® FR3SH™ Large

Prehension: act of taking the chew spontaneously into the mouth

**VeggieDent® FR3SH™ chews are highly palatable for dogs
(100 % prehension, 97% chewing, 92% consumption in average)**

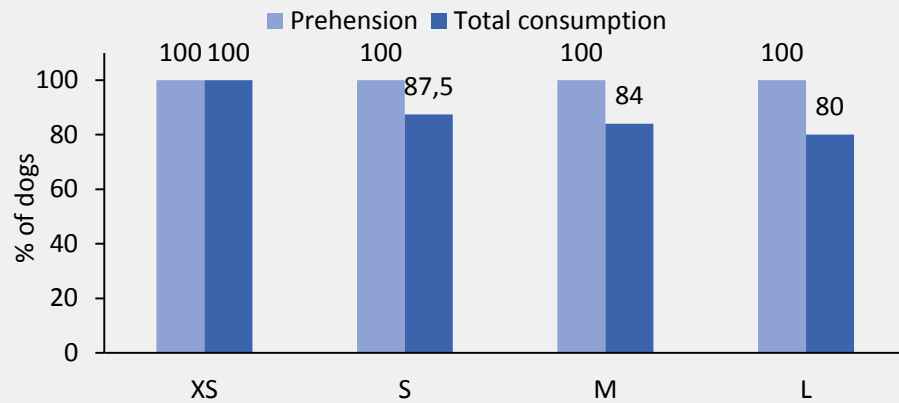
Prehension and consumption of VeggieDent Fr3sh



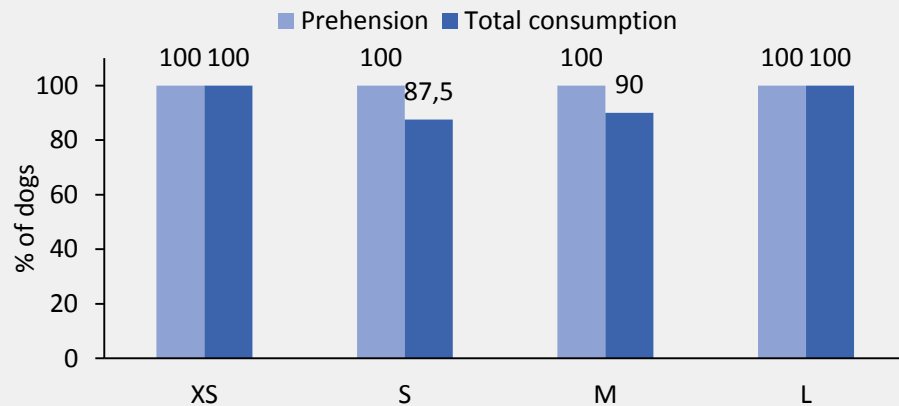
Palatability Veggiedent and Veggiedent Fresh

FR3SH™

Prehension and consumption of Veggiedent



Prehension and consumption of Veggiedent Fr3sh



■ Palatability evaluated on different trials

■ Veggiedent

- 36 dogs of different weights

■ Veggiedent Fresh

- 37 dogs of different weights

■ Conclusion

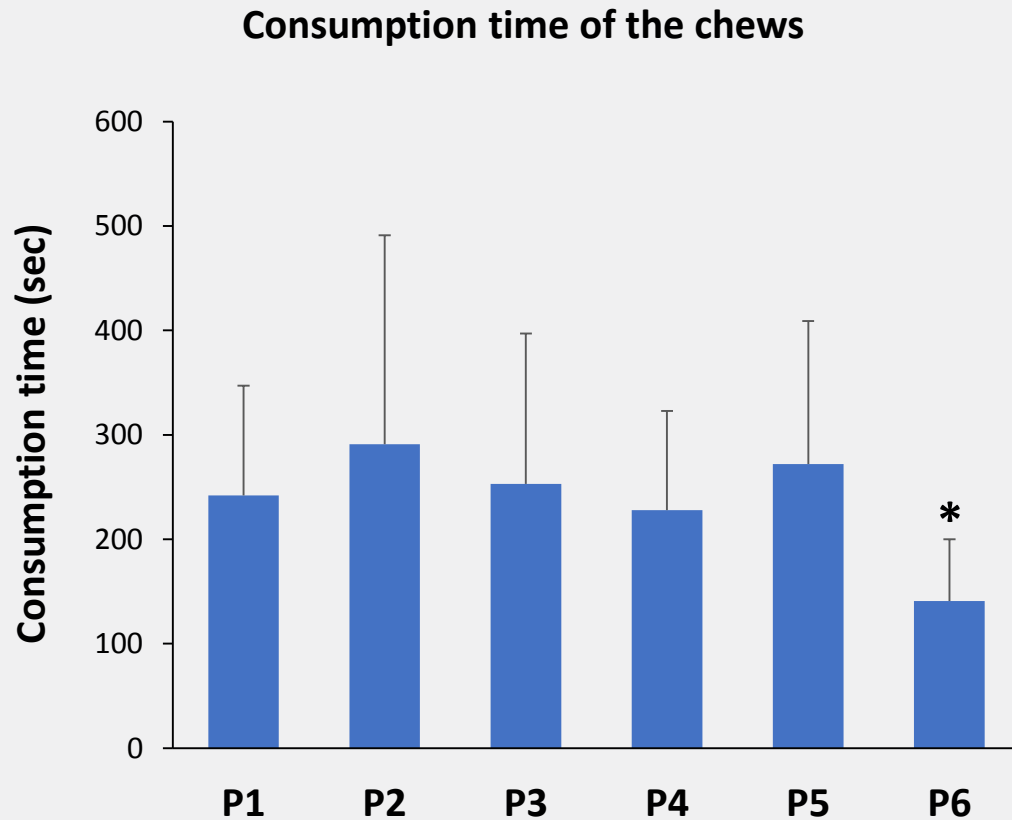
Like VeggieDent®, VeggieDent® FR3SH™ has a high palatability



Chewing time

Chewing time of different chews

FR3SH™



* $P < 0.05$ (Kruskal-Wallis et post-hoc test)

Study design

Groups	N	Protocol
P1 = Veggiedent Fresh (Virbac)	37	1 chew per day
P2 = Dental care chews (Hill's)	36	1 chew per day
P3 = Dentastix (Pedigree)	38	1 chew per day
P4 = Oravet (Merial)	37	1 chew per day
P5 = Prozym RF2 stick (Ceva)	38	1 chew per day
P6 = Greenies dental treat (Mars)	37	1 chew per day

blinded, cross-over and randomized study

Evaluation of consumption time

Conclusion

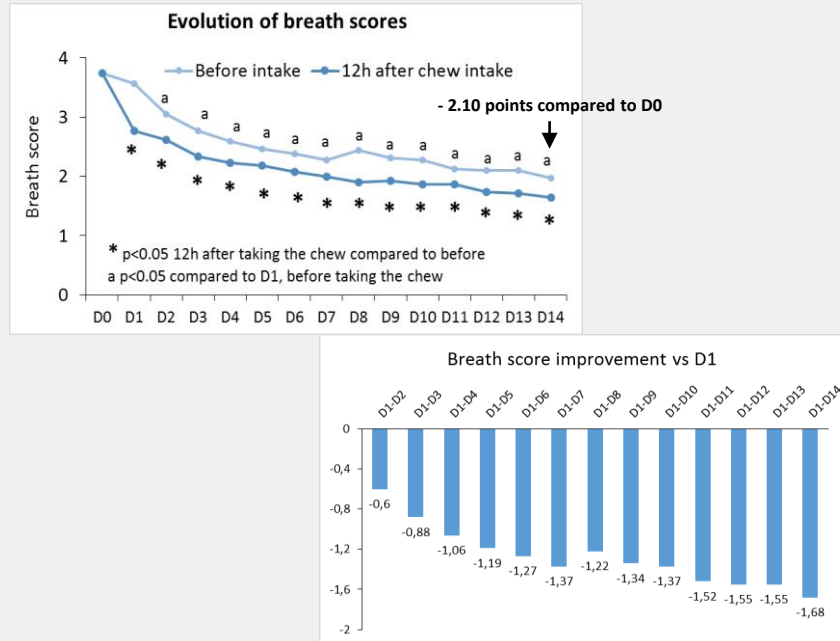
Veggident Fr3sh had a consumption time similar to 4 other products and had a longer consumption time than Greenies dental treat (Mars).



Efficacy studies

Perception of efficacy (an open field trial)

FR3SH™



Pet owners evaluation :

- Breath evolution was perceived as “strongly improved” or “improved” by 90% of pet owners ($p < 0,001$).
- Owner’s rate of overall efficacy = 7,26/10
- Acceptability score = 9,28/10
- Satisfaction score = 7,54 /10
- 87% of owners would recommend the product.

Study design

39 privately owned dog

	Users of dentals	Non-users of dentals
1st week	Wash-out of their dentals	
2nd week	Wash out Measure breath 1x/day	
3rd & 4th weeks	1 Veggie 1x/day Measure breath before Veggie & 12h later	

Breath was evaluated before and 12 hours after the chew administration (scale 0-5, 0= no odor to 5= extremely strong odor).

Conclusion

VeggieDent FR3SH™ chews for dogs have an excellent breath freshening activity from day 1 and remaining 24h after taking the chew. The breath was further improved after daily use of the chews for a few days.

VeggieDent Fr3sh efficiency

C.E.T.[®] VEGGIEDENT[®] FR3SH[™] Dental Chews showed⁵:

DAY 1



SIGNIFICANT BREATH
IMPROVEMENT FROM DAY 1



24 HOURS



IMPROVEMENT REMAINS
OBSERVABLE AFTER EACH INTAKE



2-WEEK PERIOD



CONTINUED BREATH IMPROVEMENT
WITH DAILY USE

How to use Veggiedent Fr3sh

- 1 Veggiedent Fr3sh per day, after feed, according to body weight (4 different sizes)
 - XS for dogs < 5kg (11 lbs)
 - S for dogs 5 – 10 kg (11 – 22 lbs)
 - M for dogs 10 – 30 kg (22 – 66 lbs)
 - L for dogs > 30 kg (> 66lbs)



Take-home messages

- Same features of Veggiedent: quality, trust, VOHC seal on tartar
- Specific FR3SH technology
 - Pomegranate: oral
 - Erythritol: fresh
 - Inuline: non-oral
- Highly palatable and same chewing time
- Safety confirmed
- Efficacy on bad breath perceived by the owners

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THANK YOU

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Shaping the future of animal health