Evaluation and Comparison of the Effectiveness of VetriScience Powdered Perio-Support on the Reduction of Plaque, Calculus, and Gingivitis in Adult Dogs.

FINAL STUDY REPORT

INTRODUCTION

VetriScience Perio-Support was tested using two double-blinded trials composed of 20 total canine subjects for a duration of 28 days.
Hemopet has previously completed VOHC trials using onsite cohort groups selected from over 200 greyhounds maintained in a closed colony facility. Hemopet is inspected annually by the CA Department of Food and Agriculture and holds CDFA-approved Biologics License #84, which includes a complete animal welfare and animal care facilities review.

METHODS

The studies included 20 adult canine subjects, a number considered to be adequate to provide a reliable assessment of plaque, calculus, and gingivitis following 28 days of treatment. The subjects were selected randomly from Hemopet's closed colony of greyhounds. Routine laboratory work (Complete Blood Count and Serum Biochemistries) and a physical examination, including a thorough oral assessment to establish the presence of all test teeth as well as plaque, calculus, and gingivitis, was completed by onsite veterinary staff prior to the start of the studies.
Prior to and throughout the study, subjects were fed a premium, grain-free AAFCO-approved dry diet twice daily in appropriate amounts to maintain each animal's body weight. No access to any other treats or oral hygiene products was allowed.
Individual body weights were measured and recorded just prior to and serially throughout the study (Days 0, 7, 14, and 28).
During the test procedure phase, the protocol was double-blinded to the experienced dental hygienists who performed the scaling and scoring. Study subjects in each test group were offered the assigned control or test product once daily, 4 hours after the feeding period. On Day 0, each animal had his/her teeth cleaned, scaled and polished after the presence of gingivitis, calculus and plaque was assessed. On days 14 and 28, evaluation of plaque, gingivitis, and calculus was completed. The examination of teeth included the buccal surfaces and both sides of the mouth. Review was limited to the following 7 teeth: Maxillary Canine, Maxillary 3rd Premolar, Maxillary 4th Premolar, Mandibular Canine, Mandibular 3rd Premolar, Mandibular 4th Premolar, Mandibular 1st Molar.
(The dental procedures of scaling and scoring, involved the experienced dental hygienists with assistants from among the Hemopet staff. Overall implementation and supervision of this protocol with outside veterinary dental hygienists has been effective in dental scoring trials previously conducted at Hemopet for VOHC accreditation. The hygienists were not told in advance which test group each subject belonged to.)

RESULTS

Summaries of both trials can be seen below. Table 1 shows the results from the initial trial where G represents the gingivitis score, P represents total plaque score, and C represents calculus score. Table 2 shows the results from the second trial.
At 14 days, both trials showed a reduction in the formation of gingivitis and plaque when test dogs were compared to the controls. At 28 days, both trials showed reduction in the formation of plaque and calculus when test dogs were compared to the controls.
Additional analysis is required to determine the statistical significance of the findings.

Control Group	Day 0				Day 14				Day 28			
	G	P	C	TOTAL	G	P	C	TOTAL	G	P	C	TOTAL
Abel	1	14	0	**15**	0	44	0	**44**	7	88	17	**112**
Boss	23	14	0	**37**	15	58	0	**73**	10	74	4	**88**
Dole	0	14	0	**14**	0	48	0	**48**	0	62	4	**66**
Freestone	3	14	0	**17**	5	48	0	**53**	11	88	14	**113**
Ivy	7	14	0	**21**	13	56	0	**69**	11	56	2	**69**
Omaha	4	14	0	**18**	5	48	0	**53**	8	107	14	**129**
Poseidon	19	14	0	**33**	11	50	0	**61**	13	97	8	**118**
Seminole	10	14	0	**24**	14	60	0	**74**	11	53	9	**73**
Snowdrift	12	14	0	**26**	2	42	0	**44**	4	86	9	**99**
Whity	4	14	0	**18**	4	69	0	**72**	10	52	7	**69**
Totals	**83**	**140**	**0**	**236**	**69**	**523**	**0**	**592**	**85**	**763**	**88**	**936**
Mean	***8.3***	***14***	***0***	***23.6***	***6.9***	***52.3***	***0***	***59.2***	***8.5***	***76.3***	***8.8***	***93.6***
Study Group	Day 0				Day 14				Day 28			
	G	P	C	TOTAL	G	P	C	TOTAL	G	P	C	TOTAL
Aleat	4	14	0	**18**	1	56	0	**57**	3	68	9	**80**
Bobo	9	14	0	**23**	9	53	0	**62**	14	62	19	**95**
Cupcake	9	14	0	**23**	4	56	0	**60**	2	60	14	**76**
Cry Baby	14	14	0	**28**	1	63	0	**64**	2	54	1	**57**
Dimitri	15	14	0	**29**	13	48	0	**61**	24	67	5	**96**
Gallifrey	12	14	0	**26**	14	52	0	**66**	20	58	11	**89**
Joseph	6	14	0	**20**	6	42	0	**48**	12	69	11	**92**
Klein	5	14	0	**19**	4	34	0	**38**	7	34	8	**49**
Maggie	9	14	0	**23**	4	18	0	**22**	6	38	2	**46**
York	9	14	0	**23**	7	50	0	**57**	7	46	1	**54**
Totals	**92**	**140**	**0**	**232**	**63**	**472**	**0**	**535**	**97**	**556**	**81**	**734**
Mean	***9.2***	***14***	***0***	***23.2***	***6.3***	***47.2***	***0***	***53.5***	***9.7***	***55.6***	***8.1***	***73.4***

Table 1 – Summary of Trial #1

Control Group	Day 0				Day 14				Day 28			
	G	P	C	TOTAL	G	P	C	TOTAL	G	P	C	TOTAL
Booth	0	14	0	**14**	0	76	4	**80**	4	108	11	**123**
Uncle	8	14	0	**22**	0	49	8	**57**	9	69	15	**93**
~~Tetros*~~	~~0~~	~~14~~	~~0~~	~~**0**~~	~~0~~	~~14~~	~~0~~	~~**14**~~	~~0~~	~~30~~	~~1~~	~~**0**~~
Dancer	0	14	0	**14**	14	49	2	**65**	3	46	16	**65**
Jenna	16	14	0	**30**	14	85	7	**106**	19	87	22	**128**
Tribal	0	14	0	**14**	2	65	6	**73**	3	63	17	**83**
Zayda	0	14	0	**14**	12	89	7	**108**	9	67	18	**94**
Larkin	42	14	0	**56**	40	49	10	**99**	35	52	24	**111**
Siesta	0	14	0	**14**	0	89	10	**99**	0	75	22	**97**
Evening	8	14	0	**22**	17	63	7	**87**	12	90	16	**78**
Totals	**74**	**126**	**0**	**200**	**99**	**752**	**61**	**774**	**95**	**617**	**161**	**872**
Mean	***8.2***	***14***	***0***	***22.2***	***11***	***83.6***	***6.8***	***86***	***10.6***	***68.6***	***17.9***	***97.7***
**Data omitted from analysis*												

Study Group	Day 0				Day 14				Day 28			
	G	P	C	TOTAL	G	P	C	TOTAL	G	P	C	TOTAL
Gibbs	0	14	0	**14**	0	65	10	**75**	4	56	18	**78**
SunnyDaze	14	14	0	**28**	4	72	7	**83**	14	40	14	**68**
Robbie	12	14	0	**26**	6	38	6	**50**	9	56	17	**82**
Zazzles	2	14	0	**16**	0	42	3	**45**	0	54	7	**61**
Atticus	17	14	0	**31**	14	66	11	**91**	8	66	12	**86**
Genie	0	14	0	**14**	5	51	9	**65**	5	74	20	**99**
Goofy	0	14	0	**14**	4	62	0	**66**	8	92	12	**112**
Lester	0	14	0	**14**	0	36	2	**38**	3	66	9	**78**
T-Dog	5	14	0	**19**	7	67	5	**79**	13	70	12	**95**
Caroline	2	14	0	**16**	5	47	5	**57**	10	68	13	**91**
Totals	**52**	**140**	**0**	**192**	**45**	**546**	**58**	**647**	**74**	**642**	**134**	**850**
Mean	***5.2***	***14***	***0***	***19.2***	***4.4***	***54.6***	***5.8***	***64.7***	***7.4***	***64.2***	***13.4***	***85***

Table 2 – Summary of Trial #2

Note that one subject from the control subject group in the second trial (Tetros) appeared to be a statistical outlier and the data was omitted from the analysis.

CONCLUSION

VetriScience Perio-Support was tested at Hemopet using two double-blinded trials which showed promising results in reducing the formation of several factors that contribute to periodontal disease.

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