Iris Sample Processing
60 Glacier Drive
Westwood, MA 02090
www.proiris.com

Toll-Free (800) 782-8774
Phone (781) 551-0100
Fax (781) 551-0036
info@proiris.com

Comparison Study of StatSpin® OvaTube™ and Standard Centrifugal Method for Recovery of Fecal Parasite and Ova Detection

Sponsored At:
City Kitty Veterinary Care for Cats
Providence, Rhode Island
Dr. Cathy Lund DVM, President

Board member CAPC (Companion Animal Parasitology Council)

DOCUMENT # 64-006298-001 REV A

Comparison Study of StatSpin® OvaTube™ and Standard Centrifugal Method for Recovery of Fecal Parasite and Ova Detection

Purpose

The StatSpin OvaTube (Iris Sample Processing, Westwood, MA) is a single-use device for centrifugal floatation and detection of parasite ova. Fecal samples are collected, mixed with floatation fluid, and centrifuged all in the same device.

This study evaluated the performance of the StatSpin OvaTube (Iris Sample Processing, Westwood, MA), and standard centrifugal method (City Kitty Veterinary Care for Cats, Providence, RI) for the recovery of fecal parasite and ova detection.

Materials and Methods

Approximately one gram of stool sample was collected from fifty three different felines. The sample was split and tested with the StatSpin OvaTube and the standard centrifugal method (SCM). Both methods used the same centrifuge Roche Model 0171 (fixed angle rotor) with the same speed 3,400 rpm and spun for 5 minutes. Cover slip time was 10 minutes for standard centrifugal method and 3 minutes for the StatSpin OvaTube. All samples were processed with Sodium Nitrate floatation fluid Sg =1.25-1.30.

Results

The tables below present the comparison data for each positive sample. Although the results are reported as semi quantitative (negative, rare, few, moderate and many), performance of the StatSpin OvaTube was evaluated based on the number of samples reported as positive and negative compared to the SCM. There were two types of ova identified, Roundworm and Whipworm and also the protozoan Coccidia.

Interpretation

For 48 of the 53 samples, ova recovery results for the StatSpin OvaTube and standard centrifugal method are in equal agreement. Standard centrifugal method (SCM) samples #20 and #52 were negative and the StatSpin OvaTube #20 and #52 were positive for Roundworm ova. In sample #8 Coccidia were found by both methods. In sample #50 Whipworm ova were found by both methods, but in greater quantity by OvaTube. In sample #50 and #53 Roundworm ova were found by both methods, but in greater quantity by the OvaTube.

Interpretation of the results should include consideration to the variables involved in the testing methods: non-homogeneity of the fecal sample and variation in sample weights.

Discussion

The data indicates that for all the samples tested, the StatSpin OvaTube yielded comparable results to the samples when using the standard centrifugal method. However, the StatSpin OvaTube method did retrieve positive results for roundworm ova which the SCM did not. Sample # 20 recovered 41 roundworm ova and sample # 52 recovered 11 roundworm ova.

Conclusion

In 48 samples StatSpin OvaTube method performed comparably to the standard centrifugation method. In five cases the OvaTube performed better than the SCM method. The StatSpin OvaTube has a 3 minute cover slip transfer for microscopic examination. OvaTube offers a much simpler and cleaner procedure than the standard centrifugal method.

For fifty-three duplicate samples processed by OvaTube and the Standard Centrifugal Method:

- Forty-eight samples yielded negative results for both methods.
- Two samples which tested negative for roundworm using SCM were positive for roundworm using OvaTube.
- In three samples which had detectable parasites and ova by both methods, the OvaTube recovered substantially higher numbers of Roundworms and Whipworms than the Standard Centrifugal method.

		SCM	
		+	**-**
OvaTube	**+**	**3**	**2**
	-	**0**	**48**

Counts in Positive Samples

Sample ID	OvaTube	SCM	Species
8	42	45	Coccidia
20	41	0	Roundworm
	11	3	Whipworm
50	>300	28	Roundworm
52	11	0	Roundworm
53	>100	67	Roundworm