Jacobsen Declaration
Exhibit AS
Link-Vet™

RAK Associates

Product Summary

Need to know and/or curious about your dog’s breed mixture? Are you planning on purchasing a Mixed Breed dog? BioPet distributed by Link-Vet, an Authorized Distributor of BioPet’s Products, may be the answer to satisfy your need and curiosity. “BioPet’s DNA Breed identification Test is designed for the sole purpose of identifying up to 62 breeds found in the genetic composition of mixed breed dogs”.

BioPet's test utilizes a painless and safe "cheek-swab" technique for "home-based" sample collection. Test kit includes postage paid special return envelope for your dog’s sample sent directly to BioPet's labs for processing. A frameable "Certificate of Analysis" is return mailed emailed to the purchaser.

BioPet’s product is shipped in “Unopened Manufacturer Packaging”.

Dog DNA Breed ID Test:
Test kit comes complete with all items to painlessly and safely collect your Dog’s DNA for processing by BioPet Veterinary Laboratories.

BioPet Vet Lab’s Detailed Instructions for obtaining your Pet's DNA sample
- (pdf)

BioPet Veterinary Laboratories Currently Identifies 62 Reference Breeds:

Afghan Hound, Airedale Terrier,

SKU/Item Number: RAK2008DDNA (BioPet Dog DNA Breed ID kit)
Price: $59.95 Free Shipping/Handling (United States)

**New: Free (A $15.95 Value shipped with each BioPet DNA Breed ID Test Kit).....A great gift for your children, grandchildren, nieces and nephews.**

**Engine Commander Suite for the Beginning Model Railroading Enthusiast-Demo Version Engine Commander controls your model trains and switches. (Windows XP OS required.)**

[See Engine Commander Details](http://www.link-vet.com/)

Contact:

**Link-Vet**  
A Business Unit of RAK Associates  
Box 1508  
McCormick, SC  29835

http://www.link-vet.com/
DNA Testing - Why this is important

It is almost impossible to determine the accuracy of any Canine DNA analysis. This is because all dogs are very closely related come from the same ancestors; short time ago. Most breeds only became differentiated within the last 200 years. There are a great many close family links and it is possible to detect a very, very low level of DNA that are more closely associated with other breeds resulting as an indication of presence of other breeds.

It is known that not all canines that are touted as "pure breed" animals; are actually pure breed back through the generations and this situation is made worse for some breeds as there were controlled cross breeding programs allowed in the past to enhance or remove certain traits. For example, a pure bred Irish Setter conceivably contain English Setter DNA. Therefore defining accuracy in the genetic makeup currently is not scientifically justifiable.

There are 2.5 million mapped SNP (single nucleotide polymorphisms) markers identified in the canine genome. The AKC, American Kennel Club, registers 130 breeds of pure breed dogs of which 61 breeds represent 92.5% of all known companion breeds. Understanding the genetic makeup of a mixed breed dog leads better understanding of behavior, disease predispositions. The composition of DNA code is based on specific combinations of SNPs, Adenine (A), Cytosine (C), Guanine (G) and Thymine (T).

Depending upon the location within the chromosomes, this combination may determine whether the dog is a Boxer, Labrador, Beagle or Poodle amongst many breeds. These are in essence the Breed Signatures for the Canine Familiaris or dog. Mapping gene variation through PCR Amplification (Polymerase Chain Reaction) that involves selective hybridization, sequencing, the analysis of single base-pair extension reactions, single nucleotide polymorphisms combined with statistical methods of analysis, determines the physical traits of the mixed breed dog.

These traits explain coat colors, tail styles, coat textures, coat lengths, behavior, canine disease, disease predispositions, ear types, muzzle shapes to the pet as well as the Veterinarian. The Waltham Centre for Pet Nutrition utilizes these techniques from blood and whereas BioPet Veterinary Laboratories utilizes saliva samples. Saliva samples collect the Buccal Cells through a cheek swab process and the home based collection technique deposits these cells onto a special saliva matrix for analysis via a PCR and genetic analyzer.

Mars Veterinary utilizes blood samples are collected from the animal’s paw and stored in an EDTA blood collection tube for analysis. The cheek swab is a Home Based Test sample collection for dogs. The results of Breed Identification can determine who the grandparents because the results of the analysis are compare a library of various canine markers allowing a mapped genetic variation to be made. Another benefit is, the breed composition of the owner’s mutt may determin what type of nutrition and veterinary pet care is needed. The appearance and behavior is always determined by gene coding, variants, history, homogeneity, disorders, mutations and genetic signatures, leading additionally to breed detection.