**SUMMARY:** Ferrets are a gregarious, curious, and active pet with a high rate of metabolism. Like cats they are obligate carnivores that require high levels of quality proteins; preferably from meat and fish based proteins, and their complement of essential fatty acids. The ferret can effectively utilize cooked starches in the diet, but has a low tolerance for high levels of fermentable fiber. Effective diets for ferrets will also include adequate levels of preformed vitamin A, and supportive levels of vitamin E among the other essential vitamins and minerals. Genesis Extruded Ferret Food is formulated to meet these parameters.

**INTRODUCTION:** Ferrets (*Mustela putorius furo*) are a member of the Mustelidae (weasel) family. Their origin is not well documented, but evidence suggests that they descended along the same lines as the European polecat. Over the past century and a half ferrets have been introduced in a number of countries as a means of rodent control; especially for the control of rabbits due to their willingness to explore boroughs. Domestic ferrets are very energetic, inquisitive, and gregarious animals. This is in part what ingratiates them to people. They are also prone to stealing and caching (hiding) items, and will consume almost any small item, which makes them particularly prone to poisoning and gastrointestinal impactions.

**Ferret digestion and metabolism:** The Ferret is an obligate carnivore having evolved on a prey based diet primarily of small rodents. With a narrow head, sharp incisors, prominent canines, premolars, and carnassials used for cutting or tearing, and a single pair of molars for crunching bones and plant materials the ferrets head and dentition are well adapted for hunting and consuming prey. Their short digestive tract lacks a cecum and ileocolic valve (Bell 1999) and the rate of food passage is very quick. Ferrets are known to need multiple small eating bouts daily (~10), and are not well suited to high levels of soluble carbohydrates or insoluble fiber. The digestive enzymes and corresponding activities along the gastrointestinal tract are consistent with other predators (Oleinik 1995).

**Diet considerations:** Formal studies to determine the nutritional requirements of ferrets are minimal. In lieu of direct evidence, nutritional parameters for mink and cats have proven to be effective (NRC 2006, NRC 1982). In general, meat meal based diets of more than 30%, and 15% fat and less than 30% carbohydrate are recommended (Bell 1999). Compared to the cat, the ferret is not as effective at digesting dietary protein, but more effective at digesting dietary fat and prefers a higher fat diet (Fekete et al., 2005).
The ferret requires a similar complement of amino acids to that of the cat including sulfur amino acids such as methionine, cystine, and taurine and the ferret has a conditional dependence on dietary arginine (Thomas and Deshmukh 1986; Deshmukh and Rusk, 1989). The ferret can effectively utilize properly cooked starches, but soluble fiber may cause digestive upset. Modest levels of insoluble fibers may help with movement of digesta through the gastrointestinal tract and reduce the incidence of hairballs (trichobezoars). Linoleic and arachidonic acid are generally considered to be dietary essential fatty acids, and skin and coat condition may benefit from inclusion of omega 3 fatty acids. As elevated levels of polysaturated fatty acids are included in the diet, fortification with vitamin E will help prevent the occurrence of hepatic lipidosis and steatitis. Ferrets can effectively absorb carotenoids intact, but unlike cats, the ferret can convert beta-carotene to vitamin A, albeit inefficiently (Lederman et al., 1998). Thus the diet should be fortified with preformed vitamin A (retinyl acetate or similar). The diet should provide adequate levels of calcium and phosphorus, but not to excess as these may interfere with absorption of other trace elements such as zinc. A full complement of trace minerals should be provided in the diet, including iodine. However, direct and incidental excesses of zinc and copper should be avoided.

**Genesis Ferret:** Genesis Extruded Ferret Food is formulated to meet the nutrient needs of Ferrets throughout their life span with high quality poultry and fish proteins, essential fatty acids from poultry, flax and fish, along with the full complement of vitamins, trace minerals, and nutritional intermediates. The extruded croquette assures that the starches are fully cooked to promote complete digestibility, and the nutrients all stay conveniently bundled so that nutritional essentials don’t get separated before or during the meal.

**Nutrient Composition – Typical Values**

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude protein</td>
<td>34,0%</td>
</tr>
<tr>
<td>Crude fat</td>
<td>22,0%</td>
</tr>
<tr>
<td>Crude fibre</td>
<td>2,0%</td>
</tr>
<tr>
<td>Crude ash</td>
<td>8,0%</td>
</tr>
<tr>
<td>Calcium</td>
<td>1,5%</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>1,2%</td>
</tr>
</tbody>
</table>

**Additives per kg:**

- Vitamin A: 16,500 I.U.
- Vitamin D₃: 1,500 I.U.
- Vitamin E: 250 mg
- Copper (as copper-Il-sulfate, pentahydrate): 8 mg
- Copper (as copper chelate of amino acids hydrate): 3 mg
- Taurine: 2,250 mg

**Ingredients:** Poultry meat meal, poultry fat, rice, corn, wheat flour, rice bran, protein-hydrolysate, fish meal, full egg powder, flaxseed, dried yeast, dried beet pulp, liver meal, fish oil, potassium chloride

**LITERATURE CITED:**