# SINGEN









## The differences that distinguish SINGEN Vet Tube Feeding Diet from other products:

A perfect tube feeding product must have three features:

Safety 2. Completeness 3. Convenience

#### SAFETY

- It is developed by the cooperation among professors of animal sciences, food sciences and veterinarians.
- Special hypoallergenic formula without the addition of preservatives, lactose and other sensitizers.

#### COMPLETENESS

- This is a tube feeding product specially designed for different physiological structures and energy metabolisms in dogs and cats. It does not contain harmful ingredients such as fructose and medium-chain triglycerides (MCTs).
- Fructose are frequently found in human tube feeding diets and cause fructouria in cats<sup>b</sup>.
   MCTs are known to cause fatty liver disease in cats<sup>c</sup>. The product contains essential amino acids, such as arginine, that cannot be synthesized in animals.
- Precious extracts of Chinese medicines. Co-treatment with food and medication to achieve the effects of Chinese and Western Medicines.
- Special small monomeric molecules, such as short-chain fatty acids and amino acids, substitute the polymeric high molecular weight molecules, such as proteins.
- The SINGEN Vet Tube Feeding Diet product series contain L-glutamine<sup>a</sup> to provide direct and rapid absorption in intestine, balance the drastic metabolic changes after surgery, after delivery and in weakness. They are helpful in rapid intestinal mucosa repair and reducing sepsis rate. Thie series is the best choice to provide easily digestible and highly nutritious food for pets based on particular physiological needs.

#### CONVENIENCE

- With special homogenization techniques, the viscosity of high-density nutrition diet is decreased and the texture is smooth enough to be given easily without the risks of incomplete grinding, plugs and spills. The syrupy consistency prevents plugging and contamination which occurs in various feeding tubes.
- The SINGEN Vet Tube Feeding Diet series have the right formulas specially designed for different disease conditions and specific physiological needs.
- The SINGEN Vet Tube Feeding Diet is different from minced dry feed that frequently cause plugging and spilling during tube-feeding.
- The total volumes of the SINGEN Vet Tube Feeding Diet series are designed under precise calculation for easy and time-saving operations.





#### COMPLETE SERIES FEATURES

- · Small molecular hydrolyzed proteins are rich in essential amino acids, including L-glutamine. It is proven to be able to shorten the wound healing time after surgery, provide the essential factors for cell recovery of intestinal mucosa and increase the survival rates of patients in several studiesa.
- · Special small molecular monomers, such as short-chain fatty acids and amino acids, substitute high molecular polymers of meat mash.
- · The series is developed by the cooperation among professors of animal sciences, food sciences, and veterinarians. Special hypoallergenic formula without the addition of preservatives, lactose, and other sensitizers.
- · The manufacturing process includes vacuum sealing and autoclave sterilization.

## PROTEIN TYPES

#### CONCENTRATED PROTEIN

#### **Concentrated Drying Process**

- Macromolecular proteins
- · Protein molecular weight:
- Varying from 100,000 to 1,000,000 Dalton

It must be digested into small molecular fragments before absorption.

ANIMAL **PROTEIN** VEGETABLE PROTEIN

#### ISOLATED PROTEIN

#### Separation, Concentration & Drying Process

- Macromolecular proteins
- Protein molecular weight:
- Varying from 100,000 to 1,000,000

It must be digested into small

#### HYDROLYZED PROTEIN

## Proteolysis Technology

Good

- Low-molecular-weight proteins
- Protein molecular weight:
- Varying from 1,000~100,000 Dalton Greatly enhance the absorbability of protein.





molecular fragments before absorption.



Tube feeding diets designed for pets.



#### TUBE FEEDING PROCEDURES

 Divide the daily feeding quantity into 4-6 meals. Please put the remaining portion of the meal in the refrigerator. Warm up and stir before using for the next meal.



2. Setup the feeding tube. Prepare clean syringe and 5 to 30 ml of clean water. Flush with 3 to 5 ml of clean water first to make sure the



Before removing syringe: ① Fold the feeding tube slightly at the position that contains water, using your left hand. ② Then, with your right hand, remove the syringe taking care not to generate any air segment in the feeding tube.



1) Load syringe with tube feeding formula (using right hand). ② Attach syringe to feeding tube ③ Release the folded tube from left



5. Feeding principles: Small portions, frequent meals, increasing gradually, slowly. Warm up food before feeding.



6. Feed slowly over a period of 5-10 minutes for each meal. If there are adverse reactions, please reduce the portion or stop feeding temporarily.



When feeding is completed, flush tube with 5-30ml of clean water to remove food residue from tube, and close feeding tube with stopper. (Please refer to the steps shown in Figure 3. 4. before removing Figure syringe



8. Observe for 10 minutes to see if there are any adverse reactions.







## SINGEN Tube Feeding Diets are suitable for:

Dogs and cats on tube feeding using nasogastric tubes, oesophagostomy tubes, gastrotomy tubes, or jejunostomy tubes after surgery and when enteral nutritional supplementation is required.

Dogs and cats with limited food intake: such as inappetence and poor appetite due to the side effects of radiation or chemotherapy.

Dogs and cats with malnutrition, old age or poor immune functions

Feeding during the transition period from liquid to solid food

#### TUBE FEEDING PRINCIPLES

- Small portions, frequent meals:
   Divide the recommended daily feeding amounts into 4-6 meals.
- 2. Increase gradually:

The first day: 25% of the daily feeding amounts.

The second day: 50% of the daily feeding amounts.

The third day: 100% of the daily feeding amounts.

- 3. Slowly: Feed over a period of 10 minutes each time.
- Warm up: Avoid feeding cold Recovery Diet Liquid as this may cause intestinal mucosa irritation. Store unused portion in the refrigerator and warm up before next feeding.

#### REMARKS

- The products are used for enteral nutrition purposes only, such as feeding tubes or oral.
   They should not be used in parenteral delivery systems, such as intravenous infusion.
- Please shake well before opening. Please put the remaining portion in the refrigerator, warm up before using and use the remaining portion in two days.
- Due to the fluid form of the diet, it is normal to see slightly soft feces after feeding. If there
  is diarrhea, it is recommended to feed with dietary fibers or consult with veterinarians.

Tube feeding diets designed for pets.



#### VRC1

#### Recovery Diet for Felines

The high energy formula is composed of small hydrolyzed proteins. It is suitable for cats with physical weakness that require urgent supplementation to compensate the energy metabolism. The special formula is supplemented with Chinese natural herbs to improve immune functions and reduce secondary infection.

#### Indication

- · Cats recovering from trauma and multiple fractures.
- Pregnant, post-queening, or lactating cats that require high energy supplementation.
- · After general surgery. Before and after dental therapy.
- · To support wound and muscle recovery.

## Ingredients

Hydrolyzed proteins, taurine, essential amino acids, fatty acids (omega-6 and omega-3), vitamins, minerals, water, and herbal extracts (Panax spp., Astragalus spp., Angelica spp., and Lycium spp.).



#### GINSENG

- · Enhances immune system
- · Reduces side effects of radiation or chemotherapy
- Accelerates tissue repair



#### **ASTRAGALUS**

- Antioxidative
- · Enhances phagocytosis of reticuloendothelial system
- · Promotes humoral immunity



#### CHINESE ANGELICA

· Stimulates hematopoesis



#### LYCIUM

- Lyceum barbarum polysaccharides (LBP): immunomodulatory, promote hematopoiesis
- leukopenia in Diminishes patients on chemotherapy

#### Calorie Content

132 ME Kcal per can

1.14 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5	3.5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	3:1	3:1	1-2:1*

Not recommended to use Fr 3.5

## **Daily Tube Feeding Amounts**

Weight (kg)	1	4	7	10
can/ day (115 mL)	1/2	1 1/2	2 1/4	3

Protein	≥ 12.61 %
Lipid	≥ 4.96 %
Carbohydrate	≤ 6.03 %
Water	≥ 72.78 %
Sodium	≥ 0.03 %





## VKC1

## Kidney Diet for Felines

Small molecular hydrolyzed proteins are used as substrates in this kidney diet. The formula is designed with low phosphorus and sodium, moderate and high-quality protein, combined with required nutrients, taurine and other essential amino acids for cats. It protects kidneys, improves appetite and replenishes energy quickly.

#### Indication

Cats with Chronic Kidney Failure fed via tube feeding.

## Ingredients

Hydrolyzed proteins (including glutamine), taurine, essential amino acids, fatty acids (omega-6 and omega-3), vitamins, minerals, water.

#### Calorie Content

124 ME Kcal per can

1.08 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5	3.5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	undiluted	undiluted	5:1

## **Daily Tube Feeding Amounts**

Weight (kg)	1	4	7	10
can/ day (115 mL)	1/2	1 1/2	2 1/4	3 1/4

## **Guaranteed Analysis**

Protein	≥ 6.61 %
Lipid	≥ 6.36 %
Water	≤73.40 %
Potassium	≥ 0.25 %
Phosphorus	≥ 0.11 %



VKC1



#### VUC1

## Urinary Diet for Felines

It contains hydrolyzed proteins (including glutamine) which are easily digestible. It is also a moderate calcium formula with lower magnesium, lower phosphorus, and accompanied by essential amino acids, taurine and nutrition. The formula helps prevent struvite and calcium oxalate stones.

Tryptophan supplement also helps reduce stress in cats.

#### Indication

For cats on tube feeding who suffer from feline lower urinary tract disease (FLUTD)

## Ingredients

Hydrolyzed protein, taurine, tryptophan and other essential amino acids, fatty acids (DHA, omega-6, omega-3), vitamins, minerals and water.

## Calorie Content

142 ME Kcal per can

1.24 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5
Dilution ratio (original liquid : water)	STATE OF THE STATE	undiluted	undiluted	3:1	2:1

## **Daily Tube Feeding Amounts**

Weight (kg)	1	4	7	10
can/ day (115 mL)	1/2	1	2 1/4	3

Crude Protein	Min. ≥ 9,60 %
Crude Fat	Min. ≥ 6.00 %
Phosphorus	Min ≥ 0.16 %
Magnesium	Min. ≥ 0.01 %
Moisture	Max. ≤ 75.00 %





## VLC1

## Feline Hepatic Lipidosis Diet

It contains hydrolyzed proteins (including glutamine) which are easily digestible. The high energy density and nutrient-rich formula with lower carbohydrate, moderate zinc, L-carnitine, taurine and arginine meets the nutrition requirements of cats with Feline Hepatic Lipidosis. It supports liver function and provides energy quickly.

#### Indication

For cats on tube feeding who suffer from hepatic lipidosis. It is not recommended for cats with hepatic encephalopathy.

## Ingredients

Hydrolyzed proteins, taurine, arginine, essential amino acids, fatty acids (omega-6 and omega-3), L-carnitine, vitamins, minerals and water.

## Calorie Content

162 ME Kcal per can

1.4 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	undiluted	3:1

## **Daily Tube Feeding Amounts**

Weight (kg)	1	4	7	10
can/ day (115 mL)	1/2	1	1 1/2	2 1/2

## **Guaranteed Analysis**

Crude Protein	Min. ≥ 11.00 %
Crude Fat	Min. ≥ 8.00 %
Total Carbohydrate	Min ≥ 3.50 %
Taurine	Min, ≥ 0.07 %
Moisture	Max. ≤ 73.50 %



#### VLC1

Tube feeding diets designed for pets.



#### VRD1

## Recovery Diet for Canines

The high energy formula is composed of small hydrolyzed proteins. It is suitable for dogs with physical weakness that require urgent supplementation to compensate the energy metabolism. The special formula is supplemented with Chinese natural herbs to improve immune functions and reduce secondary infection.

#### Indication

- · Dogs recovering from trauma and multiple fractures.
- · Pregnant, post-whelping, or lactating dogs that require high energy supplementation.
- · After general surgery. Before and after dental therapy.
- · To support wound and muscle recovery.

## Main Ingredients

Hydrolyzed proteins, essential amino acids, fatty acids (omega-6 and omega-3), vitamins, minerals, water, and herbal extracts (Panax spp., Astragalus spp., Angelica spp., and Lycium spp.).



#### GINSENG

- · Enhances immune system
- Reduces side effects radiation or chemotherapy
- Accelerates tissue repair



#### **ASTRAGALUS**

- Antioxidative
- Enhances phagocytosis of reticuloendothelial system
- Promotes humoral immunity



#### CHINESE ANGELICA

· Stimulates hematopoesis



#### LYCIUM

- · Lyceum barbarum polysaccharides (LBP): immunomodulatory, promote hematopoiesis
- leukopenia in Diminishes patients on chemotherapy

#### Calorie Content

124.2 ME Kcal per can

1.08 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5	3.5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	undiluted	3:1	1-2:1*

<sup>\*</sup>Not recommended for 3.5Fr feeding tube

## Daily Tube Feeding Amounts

Weight (kg)	2.5	5	10	20	30
can/ day (115 mL)	1	1 1/2	3 1/4	5 1/2	7

Protein	≥11.36 %
Lipid	≥4.96 %
Carbohydrate	≤ 6.03 %
Water	≥74.30 %
Sodium	≥ 0.05 %





#### VGD1

#### Gi Tract Diet for Canines

Small molecular hydrolyzed proteins are used as substrates for GI tract diet. Essential amino acids, polyunsaturated fatty acids, minerals, combined with natural plant extracts are added on to improve the dog's intestinal immunity and help maintain gastrointestinal health.

#### Indication

Dogs with gastrointestinal disease (gastrointestinal discomfort, indigestion and other symptoms) fed via tube feeding.

## Ingredients

Hydrolyzed proteins, essential amino acids, fatty acids (omega-6 and omega-3), vitamins, minerals, water, oligosaccharide, dietary fiber, and herbal extracts (*Hericium erinaceus* and *Cichorium spp.*).



#### Hericium

Hericium has been used in Chinese herbal medicine since ancient times. Its extract is often used for conditioning

intestine, and effectively maintains gastrointestinal health<sup>6, 7</sup>.



#### Inulin

Inulin in chicory can effectively reduce the pH value of intestines. It can assist the absorption of minerals, recon-

struct intestinal probiotics flora, and enhance the intestinal immunity<sup>8, 9</sup>.

#### Calorie Content

129 ME Kcal per can

1.12 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5	3.5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	3:1	3:1	1:1

## Daily Tube Feeding Amounts

Weight (kg)	2.5	5	10	20	30
can/ day (115 mL)	1	1 1/2	3 1/4	5 1/2	7

Protein	≥10.00 %
Lipid	≥ 5.70 %
Carbohydrate	≤ 6.04 %
Water	≥71.95 %
Sodium	≥ 0.01 %





#### VLFD1

#### Low Fat Diet for Canines

It contains hydrolyzed proteins including glutamine which are easily digestible. The high-quality protein formula contains lower lipid, optimized omega-3 fatty acids, moderate amount of dietary fiber, and essential nutrients for the requirements of dogs with pancreatitis. It can support physical function, improve digestion and absorption, increase appetite, and provide energy quickly.

#### Indication

For dogs on tube feeding who suffer from pancreatitis

## Ingredients

Hydrolyzed proteins, essential amino acids, vegetable oil, DHA, vitamins, minerals, water and dietary fibers.

## Calorie Content

112 ME Kcal per can

0.97 ME Kcal per ml

## **Dilution Ratio of Feeding Tube**

Diameters (Fr)	12	10	8	6	5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	undiluted	3:1

## **Daily Tube Feeding Amounts**

Weight (kg)	2.5	5	10	20	30
can/ day (115 mL)	1	2 1/4	3 1/4	6	8 1/4

Crude Protein	Min. ≥ 7.00 %
Crude Fat	Min. ≥ 2.00 %
Total Carbohydrate	Min ≥ 12.0 %
Sodium	Min <sub>+</sub> ≥ 0.05 %
Moisture	Max. ≤ 75.0 %





## VKD1

## Kidney Diet for Canines

It contains hydrolyzed proteins (including glutamine) which are easily digestible. It is also a moderate and high-quality protein formula with lower phosphorus, lower sodium, accompanied by essential nutrients for dogs. It also supports kidney function, improves appetite and provides energy quickly.

#### Indication

For dogs on tube feeding who suffer from chronic renal failure.

## Ingredients

Hydrolyzed proteins, essential amino acids, fatty acids (DHA, omega-6 and omega-3), vitamins, minerals and water.

#### Calorie Content

140 ME Kcal per can

1.2 ME Kcal per ml

## Dilution Ratio of Feeding Tube

Diameters (Fr)	12	10	8	6	5
Dilution ratio (original liquid : water)	undiluted	undiluted	undiluted	undiluted	3:1

## **Daily Tube Feeding Amounts**

Weight (kg)	2.5	5	10	20	30
can/ day (115 mL)	1	1 1/2	3	5	6 1/2

## **Guaranteed Analysis**

Crude Protein	Min. ≥ 4.20 %
Crude Fat	Min. ≥ 7.00 %
Phosphorus	Min ≥ 0.06 %
Potassium	Min. ≥ 0.20 %
Moisture	Max. ≤ 75.00 %



VKD1