

# Homemade recipe for Mumu

68.7% 18.2% 13.1% 1351 Protein Calories Fat Calories Carb. Calories (176.5 Calories) (245.6 Calories) (926.6 Calories) 16 75.6% Deficiencies with NO supplement(s) Moisture Deficiencies with supplement(s) added added Ingredients **157** g **5 3/4** oz Turkey, breast, from whole bird, non-enhanced, meat only, raw **1.75** g 1 9/10 mL Nordic Naturals Omega-3 Pet Liquid **ADJUST THIS RECIPE 12** g 2 5/8 tsp Oil, corn, industrial and retail, all purpose salad or cooking **220** g 1 3/16 cup Rice, white, long-grain, regular, raw, unenriched **300** g 2 3/4 cup slices Apples, raw, with skin **114** g 1 stalk Broccoli, stalks, raw 7/8 cup grated Carrots, raw **96** a **131** a 4 3/8 cup Spinach, raw **4.88** g 13/16 tsp Morton lodized Salt **16.88** g 6 3/4 teaspoon Balance IT® Canine (2.5 g/tsp) **0.25** a 1/4 tablet Generic L-methionine (500 mg tablet) **11 5/8** floz **344** a Water, tap, municipal

Please note that the system may have added and/or changed the oil(s)/fat(s) for you to get (a) recipe(s) that pass(es)/work(s). Without the change a fatty acid requirement and/or ratio may not have been met.

Balance It Canine Plus can be heated one time and only one time to a food safe temperature of 165 degrees For 74 degrees C and be used instead of Balance It Canine which cannot be heated. Using Canine Plus makes batch cooking easier as it can be added after cooking a batch and mixed in well right before refrigerating or freezing. Then you can apply heat one time when thawing a meal sized portion. The equivalent dose is 4.7/8 teaspoons (the gram amount is the same as the gram amount for Balance It Canine) when Balance It Canine Plus is used instead of Balance It Canine

Please read ALL the important & useful information below. If you have any questions, please contact Balance It \* or your veterinarian or board-certified veterinary nutritionist\* if the recipe was created by them.

# Yield/Servings

The average 60.0 lb healthy adult dog requires 1334.5 Calories per day (with some animal companions being able to maintain their body weight when getting 50% more or less; 667-2002 Calories per day; 1 Calorie with a capital "C" equals 1 kilocalorie or kcal). This recipe [ID: 4121387] provides 1351.4 Calories which is enough for a daily meal. Note: Neutered dogs have a lower energy need on average when compared to intact dogs.

If weight loss is needed, special nutrient enhanced recipes should be fed as available by entering "overweight" or "obese" as a condition when entering/editing a new pet/patient.

## **Directions**

#### Step 1: All ingredients should be purchased.

**NOTE:** Foods/ingredients with similar but not exactly the same name can be selected at the same time. Thus, if one selects two different ingredient options where, for example, one is potato with skin and another potato with skin/flesh only then the amount for both should be added/included. Also if an ingredient has a zero gram amount then it should not be added as it has not been included in any of the recipe formulation calculations. If a food has "Balancelt.com" in its name, it means Balance It® has enhanced its available nutrient data from additional sources of data. Not that Balance It® sells it.

Step 2: Trim any excess fat based on the specific meat description, if any. Measure or weigh ingredients and then chop large pieces into small bite-sized pieces as needed.

The most accurate method to measure is in grams (or ounces) using a kitchen scale that can be economically purchased online or at stores that sell kitchen supplies. See the Tips section below for the Quick conversion reference for many units of measurements.

If you have an ingredient that is indicated as being already cooked in its name then that ingredient should be pre-cooked and measured as a cooked amount. If you have a fruit in your recipe that is indicated as being raw in its name, it can and should be fed raw. Only vegetables and fruit can be fed raw even if an ingredient is listed as a treat to prevent serious foodborne illness.

 $Step \ 3: Combine \ all \ ingredients, including \ any \ called \ for \ added \ water \ into \ one \ pot, \ \underline{EXCEPT \ any \ vitamin \ containing \ supplements \ or \ fat \ trimmings} \ or \ raw \ fruits \ and \ mix \ well.$ 

Heat pot (initially a medium setting but a lower setting can be used later for slower cooking) and stir occasionally to prevent any burning at the bottom of the pot. (this may not be possible in a pressure cooker, including a sealed Instant Pot under pressure). Recipe is ready when any raw meat, poultry, fish, and other animal derived ingredients like eggs and egg whites is cooked to a food safe temperature of 165 degrees F or 74 degrees C. If any grains, tubers, or legumes/beans are not fully cooked then additional water (if not a recipe designed for higher energy density) and/or cooking time at a lower heat setting may be necessary. Food should not be continued to be heated/cooked after this food safe temperature has been reached as it could lead to additional vitamin heat degradation that has not been accounted for in the recipe.

If using Balance It® Canine Plus or Balance It® Canine K Plus, add and mix in the called for supplement AFTER taking the pot off of heat and just before refrigerating or freezing. These two supplements have extra vitamins added to allow for the application of heat one time, for example when thawing a meal sized portion of already prepared food.

If using any other vitamin containing supplement besides Balance It® Canine Plus or Balance It® Canine K Plus, add and mix the called for supplement right before feeding a meal portion and after any thawing/reheating. Any added supplement(s) should be equally distributed or spread throughout the food and any meals. The total daily amount of any supplements are not to be fed at only one meal or sporadically given if preparing large batches and should always be well mixed with food.

The addition of called for supplement(s) is not optional as this/they provide(s) needed essential nutrients and prevent(s) nutrient deficiencies from developing, see Fortifying section below.

Oils are used in recipes to add needed calories and fat, and are carefully calculated to also provide essential fatty acid(s) and meet any desired fatty acid ratio(s). They are not being added as a pot coating and should be added on top of other ingredients before mixing. If you are concerned about adding oil due to a concern of fat intolerance in your dog or cat, please be sure to speak with your veterinarian, and if needed, indicate this by entering "fat" in the "Any special needs or diet we should be aware of? field of Step 1 to see condition options when building a recipe.

Good hygiene and safe food handling practices (e.g., washing hands, surfaces) should always be followed and utensils/bowls washed in a dishwasher or with very hot (155 degrees F or 68.3 degrees C) water. This along with cooking can help prevent foodborne illness.

## Condition(s)

 $Strategies for the nutritional \, management \, of the following \, condition (s) \, has/have \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, recipe: \, and \, been incorporated \, into \, this \, and \, been incorporated \, into \, and \, been incorporated \,$ 

# AAFCO Dog Maintenance

Strategies & requirements can change, to see a current summary, please see Step 1's "Any special needs or diet we should be aware of?".

Balance It® strongly recommends frequently creating or attempting to create the recipe again (at least every few months) in case employed strategies or ingredient nutrient data are updated affecting the overall recipe. If you have questions about any strategies for health conditions, Balance It® suggests speaking with the veterinarian or board-certified veterinary nutritionist® that provided you the recipe and/or approved your access to building recipes. The FDA and state law restrict Balance It®'s ability to specifically answer these types of questions because as a software developer &/or manufacturer, we do not and cannot have a valid veterinarian-client-patient relationship. If your animal companion has a condition that is nutritionally managed, and that condition is not listed above or a new condition not listed develops, please create a new recipe with that condition added and request a new veterinary approval as indicated. Never feed a recipe that is not formulated for the nutritional management of current condition(s)/requirement(s).

## **Quick conversion reference**

1 Calorie = 1 kilocalorie (kcal)

1 colored scoop (scoops are found in some products as noted on labels) = 5 mL

1 white scoop =  $0.5 \, \text{mL}$ 

16 tablespoon (tbsp) = 8 fluid ounce (fl oz) cup (aka cup)

1/16 cup = 1 tbsp

1tbsp = 3 teaspoon (tsp)

1tsp = 4.93 milliliter (mL)

1 ounce (oz) = 28.35 grams

8 fl oz cup = 237 mL

1000 mL = 1 liter (L)

1000 micrograms (mcg) = 1 milligram (mg)

1000 mg = 1 gram (g)

1000 g = 1 kilogram (kg)

floz and mL do not have a constant, direct conversion to grams as they are measures of volume not mass and conversion differs depending on the specific density of what is being measured.

#### Wash your hands

Good hygiene and safe food handling practices (e.g., washing hands, surfaces) should always be followed and utensils/bowls washed in a dishwasher or with very hot (155 degrees F or 68.3 degrees C) water. This along with cooking can help prevent foodborne illness.

## Important note about supplements

The addition of called for supplement(s) is not optional as this/they provide(s) needed essential nutrients and prevent(s) nutrient deficiencies from developing, see Fortifying section below.

#### Fortifying

## Rationale:

Feeding common human foods is not the same nutritionally as consuming evolutionary whole prey or fresh kills. Meat for human consumption has generally been butchered -- exsanguinating, eviscerating, and deboning. This loss of blood, internal organs especially liver, and bone, removes very concentrated sources of essential nutrients (like electrolytes, trace minerals, vitamins, and macrominerals like calcium) that then need to be fortified in a diet meeting the requirements of dog and cat companions. Supplementing human foods with purified sources of these essential nutrients ensures consistent potency, avoids the addition of potential antigens, eliminates concurrent feeding of natural toxins (e.g., many other compounds are ingested when another animal's "filter." like liver, is eaten), and avoids/reduces cross contact/contamination concerns. If a whole prey/food diet is desired, please consult with a board-certified veterinary nutritionist\*.

#### Methods:

Balance It (www.balance.it previously www.balanceit.com) offers **three methods to fortify human foods** with essential nutrients that would otherwise be missing when feeding common human foods. The specific method for this recipe can be found above.

General Option 1. Most healthy adult recipes use a food (aka human) grade, non-heatable, patented, amino acid, mineral, and vitamin powder manufactured by Balance it®. This includes the following products, Balance it® Carnivore Blend®, and Balance it® Carnivore Blend®, and Balance it® Feline. Carnivore Blend® is mainly used in both dog and cat recipes with no to low carbohydrate content. For specific dog and cat health conditions, Balance it® also offers Balance it® Canine K (lower in phosphorus, higher in amino acids, and B vitamins), Balance it® Canine –Cu (no added copper), and Balance it® Feline K (lower in phosphorus, higher in amino acids and B vitamins). The correct supplement will be called for in your recipe if needed for a specific selected/listed condition.

General Option 2. Any recipe that uses Balance It® Canine can be instead prepared with the heatable version, Balance It® Canine Plus, which has extra vitamins added to enable for one-time heating to 165 degrees F or 74 degrees C. It, along with Balance It® Canine K Plus, is generally used for batch cooking where one wishes to avoid adding needed supplement right before offering each meal.

General Option 3. Recipes using a combination of supplements, designed for humans' unique nutritional needs (usually 8–10 different ones) that can be purchased online elsewhere and/or at local stores, are currently available for free. To access and view these, please click the "Use human supplements ONLY" checkbox under the "Get Recipe" button on Step 2 when first creating recipes. This is a less convenient option as the supplements are not optimized to meet dog or cat nutritional needs, but is a good option for those that do not wish to purchase anything from Balance it<sup>®</sup>. Balance it<sup>®</sup> uniquely offers this third option for free to help educate and counter the multitude of available online and printed homemade pet food recipes that are unfortunately not complete and balanced, and thus, not appropriate for long-term feeding.

Regardless of method chosen, fortification is required and crucial to avoid nutrient deficiencies that can cause severe adverse health consequences. Unfortunate and completely preventable examples of consequences that are commonly seen with inadequate fortification include: broken or fractured bones due to inadequate calcium, heart failure and death due to inadequate methionine in dogs or taurine in cats, anemia due to inadequate trace minerals like iron, and severe mental/neurologic dysfunction due to inadequate thiamin (aka vitamin B1).

To see nutrient deficiency details for any specific recipe, click "See Nutrient Profile" on the recipe results and scroll through the approximately 40 essential nutrients. Any percentages less than 100% indicates a potential/likely deficiency. Additional details on the calculated contributions of specific foods can be seen by hovering over the percentage (note that unknown or undefined nutrient amounts for a food or ingredient are treated as zero for calculations). If one is unable and/or unwilling to adequately fortify a homemade diet then it should not be fed or only fed very rarely or intermittently or as a treat at no more than 10% of daily calories. This should prevent one, with the best of intentions of providing wholesome nutrition, from actually instead harming their beloved companion with the food they otherwise carefully/diligently prepare.

## Storage

Prepared food can be stored in the refrigerator for up to 3 days or frozen for up to 3 weeks. Longer storage in the refrigerator can lead to spoilage and in the freezer unaccounted vitamin degradation that occurs naturally with time and decreased palatability. Do not reheat any food that already contains added supplements that contain vitamins (unless the recipe uses a one-time heatable supplement like Canine Plus or Canine K Plus that have been added after heating and before refrigerating/freezing) as heating vitamins can degrade them. It can be convenient to separately store separate single meal portions if a large batch is prepared ahead of time.

## Initially Serving Especially To Finicky/Picky Eaters

A slow transition to the new diet can improve acceptance and tolerance especially for any added supplement(s). This is especially true in animal companions that have been fed a diet without supplementation for a while. Supplements rich in essential vitamins and certain essential amino acids can have an inherently strong natural odor that is not masked when in powdered form. In the occasional case where supplement palatability is a concern, gradually working to the full dose of supplement over 5-10 days may be helpful. One pot cooking may also increase palatability/acceptance, to see those or more options, click the "Show one pot cooking ingredients ONLY" checkbox when selecting ingredients. In very rare cases, one may need to mix the needed supplement(s) with something other than the ingredients listed above to increase acceptance. Some of these can be selected as "Treats & Enticers" when creating a recipe as can other palatants. Any such addition should be limited to tolerated and non-toxic foods (e.g., no chocolate, grapes, raisins, macadamia nuts, kabocha squash, onions, garlic, etc.) that do not add up to being

more than 10% of daily calories if not called for and accounted for specifically in the recipe above. **The addition of called for supplement(s) is not optional as this/they provide(s) needed essential nutrients and prevent(s) nutrient deficiencies from developing,** see Fortifying section above.

#### Monitoring

Homemade pet food should be enjoyed and looked forward to by animal companions. With trillions of possible recipes that can be created when using the Autobalancer®, trying different foods and proportions should be expected and embraced. The goal is to find a recipe(s) that your animal companion enjoys, does well on based on simple but important things like coat and stool quality, and that you are able to sustainably prepare for them. Importantly, they should be able to maintain an ideal body condition as that has been proven to improve both the quality and quantity of life. Accordingly, please monitor your animal companions's weight and make sure they achieve/maintain a healthy weight. If they unintentionally begin to gain or lose weight, adjust the amount fed keeping all ingredients in the same proportions (one can make a new recipe online to help get the right amounts, see Yield/Servings section above) after being sure that they are not sick. Your animal companion should have access to water at all times and regular visits with a veterinarian to check that their homemade diet is meeting their needs. As noted above recipes should be rebuilt every few months in case there have been any changes to condition strategies or requirements or ingredient nutrient data.

Dogs and cats with health conditions should be regularly and closely monitored per the specific guidance of their veterinarian or board-certified veterinary nutritionist®.

## Ordering & Reordering Balance It® Supplements

One bag of Balance IT® Canine (2.5 g/tsp) will last for about 36 preparation(s) of this recipe. If using a 20 gram pouch of Balance IT® Canine (2.5 g/tsp) (or Canine Plus) instead, one pouch will last for about 1.2 preparation(s) of this recipe. To order or reorder, go to www.balance.it and click Products OR purchase from your veterinarian. Some supplements require a specific vet. approval or "vet code" per FDA CPG Sec. 690.150 guidelines. Requesting vet. approval can be done simply during checkout or when attempting to view certain recipes. Vet codes are made available to clients directly by their veterinarian or board-certified veterinary nutritionist® only and are not provided by Balance It® to its customers. If you'd like to set up a convenient, automatic reorder, please select that option during checkout. You can cancel your standing automatic reorder at any time before the early morning it is scheduled to next ship.

#### Cautions

The Autobalancer® provides access to thousands of human foods including ones that may seem strange or even undesirable for an animal companion. Balance It® intentionally makes as many human foods available as possible, while completely avoiding foods well-known to be toxic to dogs and cats even at potentially low amounts. Giving the user this level of access can be very informative and helpful, but this freedom can also allow a user to create recipes with very large amounts of some foods that may not be practical (see higher vegetables and fruit diets caution below), enjoyed, readily available, and/or cost effective. In addition, some human foods that one might not typically or even ideally consider giving an animal companion are, as a consequence, made available/selectable. This "open" approach allows one to best see the impact on total calories fed and overall diet nutrient profile. If any food's addition will lead to an overall essential nutrient deficiency or excess, the resulting recipe will not be possible or pass as a protection. It is always important to remember the old saying, "the dose makes the poison." For example, vitamin D is essential for bone health and optimal immune system function, but at too high a dietary concentration, it becomes a potentially fatal poison. Thus, additional protections, like with fish that can be naturally very high in vitamin D, are in place. Similarly some portions of plants or foods that can be toxic, while other parts of the same plant that are well tolerated, can still be selected. For example, the tomato fruit which is commonly used in commercially prepared and homemade pet foods as a good source of fiber and antioxidants like lycopene is available, while tomato leaves and stalks are and should be avoided given the presence of natural toxins found in the green parts of all/most nightshade plants including potatoes.

Nutrition is an evolving science and dogs and cats can have very specific needs; therefore, if you have a concern about feeding a food to your specific animal companion, Balance It® always recommends speaking with your veterinarian and/or board-certified veterinary nutritionist® first. You can also reach out to us here at Balance It® (see the Contact Us link in the footer of our website) about the safety of any specific food available for selection for further clarification prior to use/feeding.

Changing ingredients or their amount can be harmful and create nutrient deficiencies and/or toxicities. The recipe must be followed exactly. If a different ingredient and/or amount is desired, create a new recipe at www.balance.it and/or use the adjust link or button on recipe results page to enter specific amounts to try and create a new recipe. Some changes, substitutions, or adjustments may not be possible given the inherent nutrient profile of selected foods, but trillions of options are available and possible. If you are struggling to fully understand why changes are not passing/working or need more advanced help, please consider a consultation with a board-certified veterinary nutritionists as listed at www.vetnutritionist.com or www.vetspecialists.com. These specialists have extensive nutritional knowledge and are an excellent referral and/or client education option for challenging cases.

Higher dietary protein and fat concentrations may not be tolerated by all healthy adult dogs and cats. Higher concentrations are generally considered to start at over 35% protein/fat calories. The Autobalancer® that powers the Recipe Builder allows for the creation of recipes with the widest range of caloric distributions possible as dogs and cats can do well on and prefer a spectrum of proportions. If you are unsure what is optimal for your animal companion and/or if they will tolerate higher concentrations of protein or fat, please speak with your veterinarian or board-certified veterinary nutritionist® before feeding such a recipe/diet.

# Higher vegetable and fruit diets can cause Glupset/diarrhea and be too voluminous.

Selecting only vegetables and/or fruit as carbohydrate sources in higher carbohydrate diets can result in large amounts of vegetables or fruit being called for drastically increasing dietary fiber intake & moisture and/or reducing energy density. This can result in a large amount of fiber in the feces that retains moisture and loosens feces and/or a volume of food being fed that cannot be readily eaten. To avoid this, reduce the amount of carbohydrate in the overall recipe and/or select a carbohydrate source from the "blue" Carbs button group of grain and tuber dense carbohydrate sources.

Vegan or vegetarian (and possibly grain free diets) must be carefully monitored to prevent heart disease that can be fatal. If feeding a vegetarian diet (available for dogs only) or a diet very rich in legumes (aka beans) and possibly other non-grain dense carbohydrates, regular blood taurine & methionine concentrations should be measured by one's veterinarian to ensure adequate sulfur amino acid supplementation (e.g., methionine dose) or bioavailability from the foods fed and to prevent the development of a potentially life-threatening disease called dilated cardiomyopathy (DCM). This is a still evolving and actively being researched issue and intake of other nutrients or compounds may play a role. For concerns, please speak with your veterinarian and/or board-certified veterinary nutritionists\* before feeding such a recipe.

<u>High liver diets can cause vitamin A toxicity</u>. All or mostly liver diets should only be fed, given their very high vitamin A concentration, to cats under the direct supervision and ongoing approval of one's veterinarian.

Recipe recommendations can change over time. Nutrition is an evolving science and nutrient data for many foods change and/or improve over time. Fortunately, the Autobalancer® that powers the Recipe Builder was specifically developed to be a dynamic tool and resource that can easily adapt to new information unlike the alternative of static "cookbook" recipes. This means that when new essential nutrient requirements become known to Balance It® through new published studies or due to regulations, the requirements that are used by the Autobalancer® to formulate recipes can be and are updated. In addition, this also means that the nutrient concentrations for differing foods are also refreshed from time to time. Combined, this can lead to new outcomes when creating a recipe with the same ingredients or foods later. Couple this with the potential for a supplement to also be reformulated, and recipe amounts and the ability to meet requirements does change and should be expected. Therefore, it is always a good idea to re-evaluate/rebuild any homemade recipe at least every few months. to make sure current and accurate information is being relied on for a recipe's creation.