**Table S1: Nutrients of total provided and supplemented foods per group.** Calculations based on the manufacturer’s information for the Altromin 3023 guinea pig pellets and the US Department of Agriculture National Nutrient Database. Grubb’s test was performed to control for deviations between groups and additionally the standard deviation (SD) in percentage of the mean is stated to illustrate the actual deviation for each nutrient among the experimental diets.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nutrient** | **Unit** | **Group** | | | | **Grubbs-Test** | | **% SD** |
| **Chia** | **Walnut** | **Peanut** | **Control** | **U** | **p** |
| **Proximates** |  |  |  |  |  |  |  |  |
| Energy | kcal | 76.105 | 76.945 | 76.51 | 73.675 | 0.055 | 0.056 | 1.930 |
| Total protein | g | 4.9202 | 4.91365 | 4.9665 | 4.8375 | 0.194 | 0.204 | 1.088 |
| Total lipid | g | 1.27245 | 1.4448 | 1.36495 | 1.11875 | 0.253 | 0.272 | 10.767 |
| Ash | g | 2.59025 | 2.57515 | 2.5779 | 2.56625 | 0.252 | 0.27 | 0.385 |
| Total carbohydrate | g | 8.30185 | 8.1598 | 8.1719 | 8.09125 | 0.163 | 0.17 | 1.075 |
| Fiber | g | 4.2295 | 4.091 | 4.1 | 4.0575 | 0.059 | 0.059 | 1.835 |
| Total sugars | g | 0.80125 | 0.8143 | 0.8211 | 0.80125 | 0.387 | 0.434 | 1.222 |
| Starch | g | 0.2827 | 0.2831 | 0.2836 | 0.2825 | 0.209 | 0.218 | 0.172 |
| **Minerals** |  |  |  |  |  |  |  |  |
| Calcium, Ca | mg | 253.96125 | 252.29625 | 252.26625 | 251.80625 | 0.149 | 0.155 | 0.568 |
| Iron, Fe | mg | 5.3471 | 5.32305 | 5.3314 | 5.3085 | 0.344 | 0.381 | 0.303 |
| Magnesium, Mg | mg | 73.7975 | 72.9125 | 72.9625 | 72.1225 | 0.316 | 0.346 | 0.938 |
| Phosphorus, P | mg | 258.725 | 256.155 | 256.305 | 254.425 | 0.233 | 0.248 | 0.689 |
| Potassium, K | mg | 367.116 | 367.286 | 368.606 | 365.081 | 0.209 | 0.222 | 0.397 |
| Sodium, Na | mg | 74.67475 | 74.60475 | 74.68475 | 74.59475 | 0.585 | 0.711 | 0.062 |
| Zinc, Zn | mg | 1.64615 | 1.6387 | 1.6396 | 1.62325 | 0.117 | 0.121 | 0.593 |
| Copper, Cu | mg | 0.37887 | 0.38218 | 0.37997 | 0.37425 | 0.17 | 0.178 | 0.882 |
| Manganese, Mn | mg | 1.852615 | 1.85607 | 1.84867 | 1.839 | 0.168 | 0.176 | 0.399 |
| Sulfur, S | mg | 51.71 | 51.71 | 51.71 | 51.71 | - | - | 0 |
| Chlorine, Cl | mg | 115.592 | 115.592 | 115.592 | 115.592 | - | - | 0 |
| Iodine, I | mg | 0.0328 | 0.0328 | 0.0328 | 0.0328 | - | - | 0 |
| Molybdenum, Mo | mg | 0.02435 | 0.02435 | 0.02435 | 0.02435 | - | - | 0 |
| Cobalt | mg | 0.008875 | 0.008875 | 0.008875 | 0.008875 | - | - | 0 |
| Selenium, Se | µg | 12.401 | 12.2495 | 12.161 | 12.125 | 0.082 | 0.084 | 1.055 |
| Fluoride, F | µg | 138.3875 | 138.3875 | 138.3875 | 138.3875 | - | - | 0 |
| **Vitamins** |  |  |  |  |  |  |  |  |
| Vitamin C | mg | 40.9655 | 40.964 | 40.9575 | 40.9575 | 0.525 | 0.621 | 0.010 |
| Thiamin | mg | 0.014725 | 0.01333 | 0.014825 | 0.011625 | 0.207 | 0.219 | 10.998 |
| Riboflavin | mg | 0.012225 | 0.012125 | 0.01205 | 0.011375 | 0.095 | 0.097 | 3.231 |
| Niacin | mg | 0.179275 | 0.14075 | 0.195455 | 0.135125 | 0.446 | 0.511 | 18.064 |
| Pantothenic acid | mg | 0.9415 | 0.94435 | 0.947335 | 0.9415 | 0.232 | 0.248 | 0.295 |
| Vitamin B-6 | mg | 0.39725 | 0.399935 | 0.39899 | 0.39725 | 0.378 | 0.423 | 0.335 |
| Folate | µg | 3.495 | 3.74 | 4.45 | 3.25 | 0.149 | 0.155 | 13.866 |
| Folic acid | µg | 118.95 | 118.95 | 118.95 | 118.95 | - | - | 0 |
| Choline | mg | 1.85 | 2.046 | 2.1125 | 1.85 | 0.468 | 0.541 | 6.877 |
| Betaine | mg | 0.0625 | 0.064 | 0.0655 | 0.0625 | 0.242 | 0.259 | 2.257 |
| Vitamin B-12 | µg | 1 | 1 | 1 | 1 | - | - | 0 |
| Carotene | µg | 1477.25 | 1477.25 | 1477.25 | 1477.25 | - | - | 0 |
| Cryptoxanthin | µg | 3.25 | 3.25 | 3.25 | 3.25 | - | - | 0 |
| Vitamin A | IU | 2726.645 | 2726.475 | 2726.375 | 2726.375 | 0.137 | 0.142 | 0.005 |
| Lycopene | µg | 0.125 | 0.125 | 0.125 | 0.125 | - | - | 0 |
| Lutein | µg | 34.875 | 34.875 | 34.875 | 34.875 | - | - | 0 |
| Vitamin E | mg | 3.23125 | 3.25225 | 3.2704 | 3.22875 | 0.099 | 0.101 | 0.613 |
| Vitamin D | IU | 25 | 25 | 25 | 25 | - | - | 0 |
| Vitamin K | µg | 503.7 | 503.7 | 503.7 | 503.7 | - | - | 0 |
| **Lipids** |  |  |  |  |  |  |  |  |
| 14:0 | g | 0.000775 | 0.000625 | 0.00075 | 0.000625 | 0.542 | 0.647 | 11.537 |
| 16:0 | g | 0.086225 | 0.097395 | 0.101145 | 0.075375 | 0.296 | 0.322 | 12.937 |
| 18:0 | g | 0.025685 | 0.02942 | 0.026625 | 0.021125 | 0.212 | 0.225 | 13.401 |
| 20:0 | g | 0.002465 | 0.002315 | 0.002 | 0.002 | 0.405 | 0.457 | 10.631 |
| Total SFA | g | 0.11565 | 0.12963 | 0.14217 | 0.099 | 0.341 | 0.376 | 15.264 |
| 16:1 | g | 0.002645 | 0.0025 | 0.002545 | 0.0025 | 0.096 | 0.099 | 2.684 |
| 18:1 n-9 | g | 0.13039 | 0.16337 | 0.238155 | 0.119375 | 0.033 | 0.033 | 32.912 |
| 20:1 n-9 | g | 0.00273 | 0.00317 | 0.005805 | 0.0025 | 0.122 | 0.126 | 43.027 |
| Total MUFA | g | 0.13367 | 0.16679 | 0.24427 | 0.122125 | 0.118 | 0.122 | 33.027 |
| 18:2 n-6 | g | 0.3243 | 0.48559 | 0.3729 | 0.295125 | 0.147 | 0.152 | 22.678 |
| 18:3 n-3 | g | 0.128275 | 0.084525 | 0.03914 | 0.039125 | 0 | 0.009 | 58.746 |
| Total PUFA | g | 0.45245 | 0.569995 | 0.41192 | 0.334125 | 0.249 | 0.267 | 22.251 |
| Total UFA | g | 0.58612 | 0.736785 | 0.65619 | 0.45625 | 0.485 | 0.565 | 19.529 |
| M:S | ratio | 1.15581496 | 1.28666204 | 1.71815432 | 1.23358586 | 0.045 | 0.046 | 18.701 |
| P:S | ratio | 3.91223519 | 4.39709172 | 2.89737638 | 3.375 | 0.406 | 0.459 | 17.840 |
| U:S | ratio | 5.06805015 | 5.68375376 | 4.6155307 | 4.60858586 | 0 | 0.012 | 10.165 |
| n-6:n-3 | ratio | 2.52816215 | 5.74492754 | 9.52733776 | 7.54313099 | 0.27 | 0.292 | 46.901 |
| **Amino acids** |  |  |  |  |  |  |  |  |
| Tryptophan | g | 0.067305 | 0.065975 | 0.066375 | 0.065125 | 0.332 | 0.365 | 1.367 |
| Threonine | g | 0.197795 | 0.19723 | 0.198665 | 0.19425 | 0.095 | 0.097 | 0.973 |
| Isoleucine | g | 0.200005 | 0.199125 | 0.200535 | 0.196 | 0.082 | 0.084 | 1.020 |
| Leucine | g | 0.33773 | 0.336725 | 0.339235 | 0.330875 | 0.08 | 0.081 | 1.089 |
| Lysine | g | 0.2231 | 0.22037 | 0.22288 | 0.21825 | 0.291 | 0.316 | 1.038 |
| Methionine | g | 0.09044 | 0.08868 | 0.089085 | 0.0875 | 0.307 | 0.336 | 1.364 |
| Cystine | g | 0.06916 | 0.068165 | 0.06878 | 0.067125 | 0.213 | 0.226 | 1.301 |
| Phenylalanine | g | 0.21183 | 0.210305 | 0.213435 | 0.20675 | 0.2 | 0.212 | 1.356 |
| Tyrosine | g | 0.152315 | 0.15153 | 0.154745 | 0.1495 | 0.299 | 0.326 | 1.426 |
| Valine | g | 0.228875 | 0.22789 | 0.229535 | 0.224125 | 0.078 | 0.08 | 1.062 |
| Arginine | g | 0.31084 | 0.311515 | 0.31555 | 0.300125 | 0.1 | 0.102 | 2.130 |
| Histidine | g | 0.111155 | 0.110455 | 0.11176 | 0.1085 | 0.142 | 0.147 | 1.282 |
| Alanine | g | 0.232595 | 0.230855 | 0.2325 | 0.227375 | 0.107 | 0.11 | 1.056 |
| Aspartic acid | g | 0.47057 | 0.47127 | 0.477855 | 0.462125 | 0.259 | 0.278 | 1.371 |
| Glutamic acid | g | 0.816 | 0.81258 | 0.82545 | 0.7985 | 0.237 | 0.254 | 1.374 |
| Glycine | g | 0.21309 | 0.212455 | 0.216145 | 0.208375 | 0.254 | 0.273 | 1.504 |
| Proline | g | 0.246755 | 0.246405 | 0.248565 | 0.242875 | 0.158 | 0.165 | 0.967 |
| Serine | g | 0.224495 | 0.22392 | 0.225605 | 0.21925 | 0.062 | 0.063 | 1.254 |