Zick’s results

**Table 1. Sensory evaluation**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **product** | **Flavour** | **Appearance** | **Taste** | **Texture** | **Crunchiness** | **Overall Acceptability** |
| A | 7.75a±1.12 | 8.10c±1.07 | 7.10a±2.10 | 6.95a±2.11 | 7.05a±1.43 | 7.90b±1.94 |
| B | 6.35b±1.76 | 7.20bc±1.67 | 6.50a±2.35 | 5.95a±2.14 | 6.55a±1.43 | 6.95ab±1.90 |
| C | 6.00b±1.62 | 6.40ab±1.14 | 7.10a±0.85 | 6.45a±1.15 | 6.85a±1.35 | 6.65a±1.42 |
| D | 5.50b±1.64 | 6.65ab±1.35 | 6.85a±1.76 | 6.45a±1.23 | 6.80a±1.24 | 7.05ab±1.05 |
| E | 5.70b±1.92 | 5.75a±1.74 | 6.30a±1.53 | 5.75a±1.62 | 6.70a±1.66 | 6.40a±1.43 |
| F | 5.80b±1.99 | 5.75a±1.65 | 6.45a±1.96 | 5.90a±1.68 | 6.70a±1.59 | 6.40a±1.73 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 2. Antioxidant**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Concentration (µg/ml)** | **DPPH Scavenging Activity (%)** | **SOD (%)** | **Ferric Reducing Power (µmol)** |
| Spoon | 200.00a±100 | 20.10a±6.02 | 22.45a±6.12 | 647.16a±361.4 |
| Plate | 200.00a±100 | 30.17b±5.07 | 14.96a±6.56 | 459.10a±258.6 |
| Phone | 200.00a±100 | 33.44b±4.77 | 16.33a±2.04 | 545.99a±282.98 |
| Television | 200.00a±100 | 34.24b±3.85 | 19.73a±4.25 | 225.53a±151.37 |
| Chair | 200.00a±100 | 17.85a±2.47 | 17.69a±4.25 | 544.94a±280.87 |
| Table | 200.00a±100 | 20.46a±1.24 | 14.28a±5.4 | 444.10a±239.65 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 3. Antioxidant 2.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ID** | **Concentration (µg/ml)** | **DPPH Scavenging Activity (%)** | **SOD (%)** | **Ferric Reducing Power ()** |
| Grape | 200a±100 | 20.51a±1.41 | 14.29a±2.05 | 345.66a±187.5 |
| Mango | 200a ±100 | 46.01c±6.16 | 32.65c±4.08 | 336.86a±193.2 |
| Avocado | 200a ±100 | 37b±3.61 | 27.21bc±5.13 | 648.47a±351.12 |
| Orange | 200a ±100 | 46.59c±5.43 | 47.62d±3.12 | 635.62a±340.52 |
| Apple | 200a ±100 | 39.57bc±1.13 | 28.57c±2.04 | 610.23a±370.44 |
| Guava | 200a ±100 | 35.78b±2.28 | 21.77b±4.25 | 639.59a±371.92 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 4. Clinical Pathology**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tags** | **ALT (U/L)** | **AST (U/L)** | **TOT PROT (g/L)** | **ALB (g/L)** | **TOT CHOL (mMol/L)** |
| A | 24ab±1.41 | 70.5ab±31.82 | 73ab±11.31 | 41a±0 | 3a±0.14 |
| B | 26ab±7.07 | 84.5ab±13.44 | 63.5a±12.02 | 40a±0 | 2.9a±1.13 |
| C | 20a±7.07 | 33a±2.83 | 72ab±7.07 | 38a±1.41 | 4.9a±1.13 |
| D | 78.5b±40.31 | 192.5b±115.26 | 82ab±1.41 | 41a±1.41 | 4.55a±0.64 |
| E | 48ab±29.7 | 116ab±56.57 | 86.5b±3.54 | 37.5a±4.95 | 5.15a±3.04 |
| F | 67.5ab±13.44 | 75.5ab±33.23 | 82ab±5.66 | 39.5a±0.71 | 6.25a±1.48 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 5. Haematology**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TAG | PCV (%) | HGB (g/dL) | RBC (10¹²/L) | MCV (fL) | MCH (pg) | MCHC (g/L) | WBC (10⁹/L) | NEUT (%) | LMPH (%) | MONO (%) | EOSI (%) | BASO (%) |
| A | 44a±1.41 | 14.65a±0.49 | 7.345a±0.25 | 60a±0 | 20a±0 | 332.5±0.71 | 14.8ab±0.28 | 21a±8.49 | 78a±8.49 | 0.5a±0.71 | 0±0 | 0±0 |
| B | 40a±8.49 | 13.3a±2.83 | 6.655a±1.44 | 60a±0 | 20a±0 | 332.5±0.71 | 11.45a±0.35 | 27.5a±7.78 | 71a±7.07 | 0.5a±0.71 | 1a±1.41 | 0±0 |
| C | 42.5a±3.54 | 14.15a±1.2 | 7.075a±0.57 | 60a±0 | 20a±0 | 333±0 | 17.8b±3.11 | 21a±1.41 | 76a±1.41 | 2a±1.41 | 1a±1.41 | 0±0 |
| D | 49a±5.66 | 16.35a±1.91 | 8.18a±0.93 | 60a±0 | 20a±0 | 333.5±0.71 | 13.25ab±0.21 | 14.5a±6.36 | 83a±8.49 | 0.5a±0.71 | 2a±2.83 | 0±0 |
| E | 38.5a±4.95 | 12.85a±1.63 | 6.425a±0.78 | 60a±0 | 20a±0 | 333.5±0.71 | 13.05ab±0.92 | 17.5a±0.71 | 79.5a±2.12 | 0.5a±0.71 | 2.5a±0.71 | 0±0 |
| F | 45.5a±0.71 | 15.15a±0.21 | 7.56a±0.11 | 60a±0 | 20a±0 | 333±0 | 15.7ab±3.39 | 19a±15.56 | 80a±15.56 | 0.5a±0.71 | 0.5a±0.71a | 0±0 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 6: Functional analysis**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Properties | Mango | Grape | Guava | Orange | Avocado | Apple |
| Bulk density (g/ml) | 0.53a±0.5 | 0.62a±0.5 | 0.8a±0.5 | 0.51a±0.5 | 0.78a±0.5 | 0.73a±0.5 |
| Water absorption capacity (g/ml) | 0.62a±0.5 | 8.3c±0.5 | 8.4c±0.5 | 6.6b±5.29 | 8.3c±0.5 | 4.8c±0.5 |
| Forming Capacity (%) | 0.8a±0.5 | 3b±0.5 | 2b±0.5 | 2a±0.5 | 3b±0.5 | 2b±0.5 |
| Swelling Capacty (% ) | 0.51a±0.5 | 88.7f±0.5 | 85.1f±0.5 | 90.9e±0.5 | 88.8f±0.5 | 86.8f±0.5 |
| Gelatinization Temperature (0C) | 0.78a±0.5 | 65.2e±0.5 | 67.3e±0.5 | 62.5d±0.5 | 68.3e±0.5 | 67.5e±0.5 |
| Emulsification Capacity (%) | 0.73a±0.5 | 36d±0.5 | 47d±0.5 | 34c±0.5 | 49d±0.5 | 41d±0.5 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05)

**Table 7: Feeding trials**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Samples | Day 1 | Week 1 | Week 2 | Week 3 | Week 4 |
| A | 81.78a±9.92 | 74.75a±14.28 | 82.7a±14.25 | 87.28a±15.18 | 85.3a±22.01 |
| B | 79.75a±18.47 | 77.45ab±16.03 | 85.9ab±20.28 | 93.48ab±20.25 | 101.25ab±18.61 |
| C | 81.33a±10.89 | 97.78abc±16.16 | 111.18bc±17.74 | 121.38bc±21.08 | 117.23b±18.74 |
| D | 84.4a±14.91 | 99.78abc±11.94 | 109.93bc±9.93 | 119.53bc±9.82 | 117.05b±9.11 |
| E | 79.63a±8.87 | 105.33c±7.72 | 122.63c±13.8 | 138.2c±16.58 | 124.13b±14.24 |
| F | 80.35a±15.21 | 102.55bc±25.7 | 116.05c±24.55 | 128.75c±29.69 | 120.1b±24.28 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).

**Table 8: Functional properties**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Samples | % Moisture content | % Ash content | % Crude fibre | % Crude lipid | % Crude protein |
| Apple | 7.26e±0.5 | 2.12cde±0.5 | 10.99d±0.5 | 11.98bc±3.04 | 22.75g±0.5 |
| Avocado | 7.17de±0.5 | 2.49e±0.5 | 17.36g±0.5 | 19.34de±3.04 | 13.56e±0.5 |
| Chair | 4.97c±0.5 | 1.21abc±0.5 | 16.76fg±0.5 | 23.01efg±3.04 | 8.31a±0.5 |
| Grape | 6.92de±0.5 | 2.15cde±0.5 | 20.85h±0.5 | 15.36cd±3.04 | 13.13e±0.5 |
| Guava | 8.39f±0.5 | 2.36de±0.5 | 16.28f±0.5 | 9.99abc±3.04 | 11.38d±0.5 |
| Mango | 9.99g±0.5 | 0.29a±0.5 | 16f±0.5 | 6.13a±3.04 | 11.81d±0.5 |
| Orange | 6.29d±0.5 | 0.74ab±0.5 | 7.65b±0.5 | 7.46ab±3.04 | 8.75ab±0.5 |
| Phone | 4.26bc±0.5 | 1.83cde±0.5 | 9.07c±0.5 | 24.77efg±3.04 | 9.62bc±0.5 |
| Plate | 3.56ab±0.5 | 1.53bcd±0.5 | 21.19h±0.5 | 25.31fg±3.04 | 14.88f±0.5 |
| Spoon | 3.19a±0.5 | 1.41bc±0.5 | 13.41e±0.5 | 27.63g±3.04 | 14.8f±0.5 |
| Table | 4.25bc±0.5 | 0.82ab±0.5 | 2.65a±0.5 | 20.97ef±3.04 | 8.75ab±0.5 |
| Television | 3.63ab±0.5 | 1.2abc±0.5 | 6.84b±0.5 | 26.57fg±3.04 | 10.06c±0.5 |

Values are means ± standard deviations of triplicate determinations. Means in the same column with different superscripts are significantly different at (p<0.05).