**LAMPIRAN**

**Lampiran 1**

**Formulir Penilaian Organoleptik**

**“Uji Mutu Hedonik”**

Nama :

Tanggal uji :

Contoh : “Biskuit Labung Kuning dan Kelor”

Kriteria mutu yang dinilai : Aroma, Rasa, Tekstur, dan Warna.

Instruksi:

Di hadapan saudara disajikan 4 buah contoh “Biscuit Labu Kuning dan Kelor”. Saudara diminta untuk memberikan penilaian terhadap aroma, rasa, tekstur, dan warna dengan menggunakan skala penilaian sebagai berikut:

1 = Sangat Tidak Suka

2 = Tidak Suka

3 = Suka

4 = Sangat Suka

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Kode Contoh | Kriteria Penilaian | | | |
| Aroma | Rasa | Tekstur | Warna |
| 257 |  |  |  |  |
| 038 |  |  |  |  |
| 369 |  |  |  |  |
| 047 |  |  |  |  |

Kritik : ………………………………………………………………………………………

………………………………………………………………………………………

Saran:………………………………………………………………………………………………………………………………………………………………………………

**Lampiran 2**

FORMULIR UJI TARAF PERLAKUAN TERBAIK

UJI TARAF PERLAKUAN TERBAIK

Responden :

Tanggal uji :

Produk : Biskuit Labu Kuning dan Kelor

Kriteria mutu : Rasa, Aroma, Warna dan Tekstur

Instruksi :

Saudara disajikan sample biskuit subtitusi Biskuit Labu Kuning dan Kelor Saudara diminta untuk memberikan pendapat tentang urutan (ranking) pentingnya keenam variabel terhadap mutu biskuit, dengan mencantumkan nilai 1-6 mulai dari kurang penting sampai terpenting.

|  |  |
| --- | --- |
| Variabel Mutu | Ranking |
| Fe |  |
| Protein |  |
| Rasa |  |
| Aroma |  |
| Warna |  |
| Tekstur |  |

**TERIMAKASIH ATAS PARTISIPASINYA**

**Lampiran 3**

Tabel 14. Hasil Uji Organoleptik

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Panelis | Warna | | | | Aroma | | | | Rasa | | | | Tekstur | | | |
| P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 |
| 1 | 4 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 |
| 2 | 4 | 3 | 2 | 1 | 2 | 1 | 3 | 3 | 2 | 3 | 3 | 4 | 3 | 3 | 2 | 3 |
| 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 2 | 4 | 4 |
| 4 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 4 | 2 | 2 | 4 | 4 | 2 | 3 | 3 |
| 5 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 4 | 2 | 2 | 3 | 3 | 3 | 3 |
| 6 | 2 | 3 | 2 | 2 | 4 | 3 | 2 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 2 |
| 7 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 3 | 3 | 4 | 2 | 2 | 3 | 3 | 3 |
| 8 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | 2 | 2 | 4 | 2 | 2 |
| 9 | 4 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 2 | 3 | 4 | 3 | 3 | 4 |
| 10 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 3 | 3 | 3 |
| 11 | 4 | 3 | 4 | 2 | 3 | 3 | 2 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 |
| 12 | 4 | 2 | 3 | 3 | 3 | 4 | 2 | 3 | 4 | 2 | 4 | 3 | 4 | 3 | 3 | 3 |
| 13 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 3 | 4 | 3 | 3 | 2 | 4 | 4 | 4 |
| 14 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 4 |
| 15 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 |
| 16 | 4 | 3 | 3 | 2 | 4 | 2 | 3 | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 |
| 17 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 4 | 4 | 3 |
| 18 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 4 | 2 | 3 | 4 | 4 | 4 | 2 |
| 19 | 2 | 3 | 3 | 2 | 4 | 4 | 2 | 3 | 4 | 3 | 3 | 2 | 2 | 3 | 4 | 3 |
| 20 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 2 | 3 | 4 | 2 | 2 | 2 | 3 | 3 |

**Lampiran 4**

HASIL UJI STATISTIK MUTU ORGANOLEPTIK

**WARNA**

**Kruskal-Wallis Test**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranks** | | | |
|  | P | N | Mean Rank |
| Warna | 1 | 20 | 42.20 |
| 2 | 20 | 33.80 |
| 3 | 20 | 45.40 |
| 4 | 20 | 40.60 |
| Total | 80 |  |

|  |  |
| --- | --- |
| **Test Statisticsa,b** | |
|  | Warna |
| Chi-Square | 3.121 |
| Df | 3 |
| Asymp. Sig. | .373 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: P | |

**AROMA**

**Kruskal-Wallis Test**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranks** | | | |
|  | P | N | Mean Rank |
| Aroma | 1 | 20 | 39.85 |
| 2 | 20 | 31.58 |
| 3 | 20 | 47.80 |
| 4 | 20 | 42.78 |
| Total | 80 |  |

|  |  |
| --- | --- |
| **Test Statisticsa,b** | |
|  | Aroma |
| Chi-Square | 6.094 |
| Df | 3 |
| Asymp. Sig. | .107 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: P | |

**RASA**

**Kruskal-Wallis Test**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranks** | | | |
|  | P | N | Mean Rank |
| Rasa | 1 | 20 | 35.10 |
| 2 | 20 | 35.18 |
| 3 | 20 | 49.30 |
| 4 | 20 | 42.43 |
| Total | 80 |  |

|  |  |
| --- | --- |
| **Test Statisticsa,b** | |
|  | Rasa |
| Chi-Square | 5.845 |
| Df | 3 |
| Asymp. Sig. | .119 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: P | |

**TEKSTUR**

**Kruskal-Wallis Test**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranks** | | | |
|  | P | N | Mean Rank |
| Tesktur | 1 | 20 | 44.35 |
| 2 | 20 | 39.70 |
| 3 | 20 | 44.30 |
| 4 | 20 | 33.65 |
| Total | 80 |  |

|  |  |
| --- | --- |
| **Test Statisticsa,b** | |
|  | Tesktur |
| Chi-Square | 3.435 |
| Df | 3 |
| Asymp. Sig. | .329 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: P | |

**Lampiran 5**

Tabel15. Hasil ranking Pentingnya Peranan variabel terhadap Mutu Biskuit

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Panelis** | **Fe** | **Protein** | **Warna** | **Aroma** | **Rasa** | **Tekstur** |
| 1 | 1 | 3 | 4 | 5 | 6 | 2 |
| 2 | 3 | 6 | 2 | 4 | 5 | 1 |
| 3 | 4 | 4 | 3 | 4 | 5 | 5 |
| 4 | 2 | 1 | 3 | 4 | 5 | 6 |
| 5 | 6 | 5 | 1 | 3 | 4 | 2 |
| 6 | 1 | 2 | 5 | 4 | 3 | 6 |
| 7 | 2 | 3 | 4 | 1 | 5 | 6 |
| 8 | 6 | 5 | 4 | 3 | 2 | 1 |
| 9 | 4 | 5 | 5 | 3 | 2 | 1 |
| 10 | 3 | 4 | 2 | 5 | 2 | 1 |
| **Jumlah** | 32 | 38 | 33 | 36 | 39 | 31 |
| **Rata-rata** | 3,2 | 3,8 | 3,3 | 3,6 | 3,9 | 3,1 |
| **Rangking** | V | II | IV | III | I | VI |
| **Bobot** |  |  |  |  |  |  |
| **Variable** | 0,820513 | 0,974359 | 0,846154 | 0,923077 | 1 | 0,794872 |

**Lampiran 6**

Tabel 16. Hasil Penentuan Taraf Perlakuan Terbaik

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Warna | | | | Aroma | | | | Rasa | | | | Tekstur | | | |
|  | P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 | P0 | P1 | P2 | P3 |
| Jumlah | 63 | 59 | 56 | 44 | 59 | 58 | 54 | 50 | 61 | 66 | 63 | 53 | 57 | 62 | 64 | 59 |
| Rata-rata | 3.15 | 2.95 | 2.8 | 2.2 | 2.95 | 2.9 | 2.7 | 2.5 | 3.05 | 3.3 | 3.15 | 2.65 | 2.85 | 3.1 | 3.2 | 2.95 |
| peringkat | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 3 | 1 | 2 | 4 | 4 | 2 | 1 | 3 |
| Bobot varabel | 1.000 | 0.937 | 0.889 | 0.698 | 1.000 | 0.983 | 0.915 | 0.847 | 0.924 | 1.000 | 0.955 | 0.803 | 0.891 | 0.969 | 1.000 | 0.922 |
| Bobot normal | 0.284 | 0.266 | 0.252 | 0.198 | 0.267 | 0.262 | 0.244 | 0.226 | 0.251 | 0.272 | 0.259 | 0.218 | 0.236 | 0.256 | 0.264 | 0.244 |
| Ne | 1.000 | 0.789 | 0.632 | 0.000 | 1.000 | 0.889 | 0.444 | 0.000 | 0.615 | 1.000 | 0.769 | 0.000 | 0.000 | 0.714 | 1.000 | 0.286 |
| Nh | 0.284 | 0.210 | 0.159 | 0.000 | 0.267 | 0.233 | 0.109 | 0.000 | 0.154 | 0.272 | 0.199 | 0.000 | 0.000 | 0.183 | 0.264 | 0.070 |
| Nh tot | 0.705 | 0.898 | 0.732 | 0.070 |  |  |  |  |  |  |  |  |  |  |  |  |

Tabel 17. Hasil Nilai Perlakuan Variabel

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Perlakuan** | **Fe** |  |  |  | **Protein** | | **Warna** |  |  | **Aroma** |  | **Rasa** |  |  | **Tekstur** | |
| P1 |  | 4,9 |  |  | 6,47 |  |  | 2,9 |  |  | 2,6 |  | 3,2 |  | 3,05 |  |
| P2 |  | 5,8 | |  | 6,68 |  |  | 2,75 | |  | 3 |  | 3,5 | 3,2 | | |
| P3 |  | 6,02 |  | 6,62 | | |  | 2,2 |  |  | 2,5 |  | 2,65 |  | 3,25 |  |

**LAMPIRAN 7**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Kandungan Gizi 1 resep | |  |  |  |  |  |  |
| Bahan | Berat (g) | Energi | Protein | Lemak | KH | Vit c | Fe |
| Tepung terigu | 200 | 730 | 17.8 | 2.6 | 154.6 | 0 | 2.4 |
| Tepung labu kuning | 25 | 1.725 | 0.525 | 18.775 | 7.25 | 13 | 0.35 |
| Telur ayam | 120 | 97.2 | 7.7 | 6.9 | 0.4 | 0 | 3.2 |
| susu kental manis | 20 | 67.2 | 1.6 | 2.2 | 11 | 1.6 | 0 |
| Tepung maizena | 30 | 114.3 | 0.1 | 0 | 27.4 | 0 | 0.5 |
| Mentega | 50 | 362 | 0.3 | 40.8 | 0.7 | 0 | 0 |
| Gula pasir | 40 | 154.8 | 0 | 0 | 40 | 0 | 0 |
| Jumlah | 485 | 1527.225 | 28.025 | 71.275 | 241.35 | 14.6 | 6.45 |

**Kandungan resep p1**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bahan | Berat (g) | Energi | Protein | Lemak | KH | Vit c | Fe |
| Tepung terigu | 185 | 675 | 16.5 | 2.4 | 143 | 0 | 2.2 |
| Tepung labu kuning | 25 | 1.725 | 0.525 | 18.775 | 7.25 | 13 | 0.35 |
| Tepung Kelor | 15 | 30.75 | 4.065 | 0.345 | 5.73 | 2.595 | 4.23 |
| Telur ayam | 120 | 97.2 | 7.7 | 6.9 | 0.4 | 0 | 3.2 |
| susu kental manis | 20 | 67.2 | 1.6 | 2.2 | 11 | 1.6 | 0 |
| Tepung maizena | 30 | 114.3 | 0.1 | 0 | 27.4 | 0 | 0.5 |
| Mentega | 50 | 362 | 0.3 | 40.8 | 0.7 | 0 | 0 |
| Gula pasir | 40 | 154.8 | 0 | 0 | 40 | 0 | 0 |
| Jumlah | 485 | 1502.975 | 30.79 | 71.42 | 235.48 | 17.195 | 8.28 |

**Kandungan resep p2**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bahan | Berat (g) | Energi | Protein | Lemak | KH | Vit c | Fe |
| Tepung terigu | 180 | 657 | 16 | 2.4 | 143 | 0 | 2.2 |
| Tepung labu kuning | 25 | 1.725 | 0.525 | 18.775 | 7.25 | 13 | 0.35 |
| Tepung Kelor | 20 | 41 | 5.42 | 0.46 | 7.64 | 3.46 | 5.64 |
| Telur ayam | 120 | 97.2 | 7.7 | 6.9 | 0.4 | 0 | 3.2 |
| susu kental manis | 20 | 67.2 | 1.6 | 2.2 | 11 | 1.6 | 0 |
| Tepung maizena | 30 | 114.3 | 0.1 | 0 | 27.4 | 0 | 0.5 |
| Mentega | 50 | 362 | 0.3 | 40.8 | 0.7 | 0 | 0 |
| Gula pasir | 40 | 154.8 | 0 | 0 | 40 | 0 | 0 |
| Jumlah | 485 | 1495.225 | 31.645 | 71.535 | 237.39 | 18.06 | 9.69 |

**Kandungan resep P3**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Bahan | Berat (g) | Energi | Protein | Lemak | KH | Vit c | Fe |
| Tepung terigu | 175 | 638 | 15.6 | 2.3 | 135 | 0 | 2.1 |
| Tepung labu kuning | 25 | 1.725 | 0.525 | 18.775 | 7.25 | 13 | 0.35 |
| Tepung Kelor | 25 | 51.25 | 6.775 | 0.575 | 9.55 | 4.325 | 7.05 |
| Telur ayam | 120 | 97.2 | 7.7 | 6.9 | 0.4 | 0 | 3.2 |
| susu kental manis | 20 | 67.2 | 1.6 | 2.2 | 11 | 1.6 | 0 |
| Tepung maizena | 30 | 114.3 | 0.1 | 0 | 27.4 | 0 | 0.5 |
| Mentega | 50 | 362 | 0.3 | 40.8 | 0.7 | 0 | 0 |
| Gula pasir | 40 | 154.8 | 0 | 0 | 40 | 0 | 0 |
| Jumlah | 485 | 1486.475 | 32.6 | 71.55 | 231.3 | 18.925 | 11.1 |