Cuadro 1. Cultivares de tuna (*Opuntia* spp.) recolectados en cada una de las regiones de muestreo, especie a la que corresponden y abreviaturas utilizadas en el texto.

|  |  |  |  |
| --- | --- | --- | --- |
| **Región** | **Especie** | **Cultivar** | **Abreviatura** |
| Ojuelos de Jalisco | *O. ficus-indica* (L.) Mill. | Burrona - blanca | BB |
| *O. ficus-indica* (L.) Mill. | Burrona -naranja | BN |
| *O. cantabrigiensis* Lynch | Memela | MEM |
| *O. robusta* H. L. Wendl. Ex Pfeiff. | Tapona | TAP |
| *O. streptacantha* Lem. | Cardona | CAR |
| *O. hyptiacantha* F.A.C. Weber in Bois | Cascarona | CAS |
|  |  |  |  |
| Lagos de Moreno | *O. ficus-indica* (L.) Mill. | Manza-naranja | MN |
| *O. ficus-indica* (L.) Mill. | Manza-blanca | MB |
| *O. ficus-indica* (L.) Mill. | Calabazona | CAL |
| *O. cantabrigiensis* Lynch | Memela | MEM |
| *O. streptacantha* Lem. | Cardona | CAR |
| *O. hyptiacantha* F.A.C. Weber in Bois | Cascarona | CAS |
| *O. hyptiacantha* F.A.C. Weber in Bois | Chavena | CHA |
| *O. hyptiacantha* F.A.C. Weber in Bois | Loba | LOB |
| *O. undulata* Griffiths | Sangre de toro | STD |
| *O. icterica* Salm-Dyck | Larguita | LAR |
| *O. icterica* Salm-Dyck | Jaraleña | JAR |
| *Opuntia* spp. | Redondilla | RED |

Cuadro 2. Caracteres morfológicos de frutos de cultivares de *Opuntia* spp. recolectadosen Ojuelos de Jalisco.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cultivar** | **Longitud (mm)** | **Diámetro (mm)** | **Grosor cáscara (mm)** | **Peso**  **(g)** | **Peso pulpa**  **(g)** | **Índice de forma** | **Pulpa**  **%** |
| **BB** | 69.4 ± 6a | 45.9 ± 3b | 2.42 ± 0.7bc | 83.3 ± 20a | 43.1 ± 14b | 0.66 ± 0.04bc | 51.3 ± 8c |
| **BN** | 69.0 ± 6a | 43.6 ± 4b | 2.05 ± 0.9c | 83.6 ± 18a | 55.4 ± 14a | 0.64 ± 0.08c | 66.0 ± 6a |
| **MEM** | 62.7 ± 4ab | 32.8 ± 2c | 2.98 ± 1.8bc | 40.8 ± 4c | 20.6 ± 2c | 0.53 ± 0.05d | 50.4 ± 2cd |
| **TAP** | 51.2 ± 10c | 49.7 ± 7a | 3.34 ± 2.1bc | 82.0 ± 32a | 47.6 ± 14ab | 0.99 ± 0.14a | 59.6 ± 6b |
| **CAR** | 51.2 ± 3c | 44.2 ± 3b | 3.94 ± 1.3b | 64.6 ± 8b | 29.5 ± 5c | 0.87 ± 0.09a | 45.6 ± 3d |
| **CAS** | 56.9 ± 7bc | 42.47 ± 3b | 6.06 ± 3.5a | 63.25 ± 8b | 23.61 ± 5c | 0.76 ± 0.12b | 37.5 ± 8e |

Los datos representan el promedio ± desviación estándar. Letras diferentes en datos de la misma columna indican diferencia estadísticamente significativa (Tukey, *P<0.05*).

Cuadro 3. Caracteres morfológicos de frutos de los cultivares de *Opuntia* spp.de Lagos de Moreno, Jalisco.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Cultivar** | **Longitud (mm)** | **Diámetro**  **(mm)** | **Grosor cáscara (mm)** | **Peso**  **(g)** | **Peso pulpa**  **(g)** | **Índice de forma** | **Pulpa**  **%** |
| **MB** | 97.0 ± 6a | 61.2 ± 3a | 5.66 ± 1.6b | 195.2 ± 18a | 103.56 ± 9a | 0.63±0.03e | 52.9 ± 9bc |
| **MN** | 71.6 ± 3b | 52.9 ± 3b | 3.2 ± 1.2cde | 121.5 ± 7b | 72.98 ± 10b | 0.74±0.05cd | 60.2 ± 9ab |
| **CAL** | 92.7± 4a | 49.7 ± 3c | 2.18 ± 0.7e | 129.5± 15b | 82.74 ± 14b | 0.54±0.02f | 63.7 ± 6a |
| **MEM** | 51.1 ± 3cd | 44.1 ± 3d | 4.1 ± 0.7cd | 55.7 ± 7de | 26.28 ± 6d | 0.86±0.04b | 47.6 ± 12cde |
| **CAR** | 51.0 ± 7cd | 44.2 ± 3d | 3.2 ± 1.3cde | 60.5 ± 12d | 27.39 ± 5d | 0.88±0.11b | 45.4 ± 3cde |
| **CAS** | 52.3 ± 5cd | 50.9 ± 3bc | 9.43 ± 0.5a | 81.8 ± 16c | 24.4 ± 5d | 0.98±0.08a | 29.9 ± 1f |
| **CHA** | 57.2 ± 2c | 43.5 ± 3de | 4.6 ± 1.2bc | 60.9 ± 9d | 24.07 ± 7d | 0.76±0.04c | 39.0 ± 8ef |
| **LOB** | 47.5 ± 3de | 42.4 ± 2de | 4.4 ± 1.9bc | 50.6 ± 8de | 21.88 ± 8d | 0.89±0.04b | 43.1 ± 14cde |
| **SDT** | 90.3 ± 12a | 42.8 ± 3de | 3.6 ± 1.2cd | 86.3 ± 13c | 45.70 ± 10c | 0.48±0.08f | 53.0 ± 9bc |
| **LAR** | 56.1 ± 3c | 37.8 ± 2g | 3.5 ± 1.2cd | 48.3 ± 4de | 20.11 ± 3d | 0.68±0.05de | 41.6 ± 5de |
| **JAR** | 46.8 ± 4de | 39.6 ± 2fg | 2.9 ± 0.7de | 44.5 ± 8e | 21.36 ± 3d | 0.85±0.08b | 49.5 ± 11cd |
| **RED** | 45.2 ± 2e | 40.6 ± 2ef | 4.3 ± 1.2bc | 44.2 ± 6e | 17.8 ± 2d | 0.90±0.06ab | 40.4 ± 4de |

Los datos representan el promedio ± desviación estándar. Letras diferentes en datos de la misma columna indican diferencia estadísticamente significativa (Tukey, *P<0.05*).

Cuadro 4. Características poscosecha de frutos de los cultivares de *Opuntia* spp. recolectados en Ojuelos de Jalisco.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cultivar** | **Característica** | | | | |
| **Humedad**  **(%)** | **Cenizas**  **(%)** | **Sólidos totales (°Brix)** | **Acidez**  **(% ácido cítrico)** | **pH** |
| **BB** | 88.3 ± 1.5a | 0.71 ± 0.2a | 11.1 ± 1.2c | 0.0 ± 0d | 7.3 ± 0.2a |
| **BN** | 86.1 ± 2.1bc | 0.25 ± 0.02d | 13.5 ± 1.8ab | 0.11 ± 0.02a | 6.7 ± 0.1b |
| **MEM** | 85.3 ± 1.2cd | 0.34 ± 0.06c | 12.3 ± 1.0bc | 0.04 ± 0.01bc | 6.0 ± 0.5c |
| **TAP** | 82.4 ± 1.7e | 0.58 ± 0.04b | 13.7 ± 2.3a | 0.08 ± 0.02b | 5.7 ± 0.3c |
| **CAR** | 87.1 ± 1.2ab | 0.40 ± 0.03c | 14.0 ± 0.6a | 0.02 ± 0.01c | 6.8 ± 0.4b |
| **CAS** | 84.4 ± 1.1d | 0.36 ± 0.05c | 11.2 ± 0.3c | 0.02 ± 0.01c | 6.1 ± 0.6c |

Los datos representan el promedio ± desviación estándar. Letras diferentes en datos de la misma columna indican diferencia estadísticamente

significativa (Tukey, *P<0.05*).

Cuadro 5. Características poscosecha de frutos de los cultivares de *Opuntia* spp.de Lagos de Moreno, Jalisco.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cultivar** | **Humedad**  **(%)** | **Cenizas**  **(%)** | **Sólidos totales (°Brix)** | **Acidez**  **(% ácido cítrico)** | **pH** |
| **MB** | 85 ± 1.3bc | 0.28 ± 0.05de | 12.3 ± 0.5cd | 0.03 ± 0.01efg | 6.9 ± 0.3ab |
| **MN** | 83.6 ± 1.3d | 0.66 ± 0.19b | 15.5 ± 0.7a | 0.10 ± 0.02c | 6.4 ± 0.2bc |
| **CAL** | 85.9 ± 1.5bc | 0.20 ± 0.05e | 12.8 ± 0.9cd | 0.07 ± 0.01d | 6.2 ± 0.3cd |
| **MEM** | 83.6 ± 2.7d | 0.27 ± 0.12de | 12.2 ± 0.9d | 0.02 ± 0.01fg | 6.0 ± 0.4d |
| **CAR** | 84.4 ± 1.5cd | 0.57 ± 0.19bc | 13.4 ± 1.7bc | 0.02 ± 0.01fg | 6.1 ± 0.1cd |
| **CAS** | 79.6 ± 2.6e | 0.90 ± 0.35a | 12.9 ± 1.1cd | 0.10 ± 0.03c | 4.8 ± 0.5e |
| **CHA** | 88.3 ± 1.7b | 0.54 ± 0.12bc | 8.8 ± 1.2e | 0.17 ± 0.01b | 5.1 ± 0.9e |
| **LOB** | 90.9 ± 2.8a | 0.40 ± 0.12cd | 7.6 ± 1.5f | 0.52 ± 0.04a | 4.1 ± 0.2f |
| **SDT** | 86.1 ± 1.5bc | 0.44 ± 0.16cd | 13.5 ± 1.0bc | 0.02 ± 0.01fg | 6.2 ± 0.3cd |
| **LAR** | 87.5 ± 1.1b | 0.56 ± 0.12bc | 13.6 ± 1.1bc | 0.00 ± 0.00h | 7.2 ± 0.0a |
| **JAR** | 83.8 ± 1.5d | 0.45 ± 0.08cd | 12.7 ± 2.1cd | 0.01 ± 0.00g | 6.0 ± 0.3d |
| **RED** | 84.7 ± 1.5cd | 0.49 ± 0.12bc | 14.7 ± 1.3ab | 0.05 ± 0.01e | 5.0 ± 0.3e |

Los datos representan el promedio ± desviación estándar. Letras diferentes en datos de la misma columna indican diferencia estadísticamente significativa (Tukey, *P<0.05*).

Cuadro 6. Contenido de pigmentos (mg/100g) en los cultivares de tuna (*Opuntia* spp.) colectados

en dos regiones de muestreo.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Región** | **Cultivar** | **Betaxantinas** | **Betacianinas** | **Betalainas Totales\*** |
|  | BN | 2.78 ± 0.51c | 0.50 ± 0.11d | 3.28 |
|  | MEM | 3.49 ± 0.44b | 5.90 ± 0.75b | 9.39 |
| Ojuelos de Jalisco | TAP | 5.06 ± 1.08a | 9.54 ± 1.71a | 14.60 |
|  | CAR | 2.26 ± 0.29d | 2.27 ± 0.56c | 4.53 |
|  | CAS | 1.60 ± 0.32e | 2.86 ± 0.74c | 4.46 |
|  |  |  |  |  |
|  | MN | 1.08 ± 0.18g | 0.53 ± 0.11e | 1.61 |
|  | CAL | 4.42 ± 2.66d,e,f | 0.79 ± 0.36d,e | 5.21 |
|  | MEM | 6.93 ± 3.16b,c | 13.61 ± 5.04b | 20.54 |
| Lagos de Moreno | CAR | 6.52 ± 3.58 b,c,d | 10.36 ± 5.43b | 16.88 |
|  | CAS | 2.04 ± 0.52f,g | 4.89 ± 1.16c | 6.93 |
|  | CHA | 5.29 ± 1.40b,c,d | 18.99 ± 3.27a | 24.28 |
|  | LOB | 2.35 ± 0.67e,f,gi | 4.95 ± 1.53c | 7.30 |
|  | SDT | 4.70 ± 0.66c,d,e | 4.41 ± 1.18c,d | 9.11 |
|  | LAR | 11.49 ± 4.53a | 20.95 ± 7.75a | 32.44 |
|  | JAR | 10.23 ± 4.88a | 20.24 ± 2.95a | 30.47 |
|  | RED | 7.12 ± 2.69b | 18.87 ± 3.94a | 25.99 |

Los datos representan el promedio ± desviación estándar. Letras diferentes en datos de la misma columna por lugar de recolecta

indican diferencia estadísticamente significativa (Tukey, *P<0.05*). \*El contenido de betalaínas totales se calculó mediante la

suma de los promedios de betaxantinas y betacianinas para cada cultivar.