Table S1 Sample identification, collection site and common names of the studied tomato accessions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | National Inventory ID | Common name | Collection site | Province | Material type |
| 1 | NC100155 | Moruno | Aranjuez | Madrid | SA |
| 2 | NC084052 | De Secano | Malaguilla | Guadalajara | RL |
| 3 | NC019923 | Moruno | Yunquera de Henares | Guadalajara | RL |
| 4 | NC019927 | Temprano gordo | Yunquera de Henares | Guadalajara | RL |
| 5 | NC026275 | Gordo | Gálvez | Toledo | RL |
| 6 | - | Gordo | Torrelaguna | Madrid | SA |
| 7 | NC079134 | Gordo | Patones | Madrid | SA |
| 8 | NC079135 | Moruno | Patones | Madrid | SA |
| 9 | NC077489 | Tomate | Olmeda de las Fuentes | Madrid | SA |
| 10 | NC077510 | De Novelda | Navalcarnero | Madrid | SA |
| 11 | NC077518 | Enano | Villa del Prado | Madrid | SA |
| 12 | NC077531 | Enano | Titulcia | Madrid | SA |
| 13 | NC077509 | Gordo | Navalcarnero | Madrid | SA |
| 14 | NC077503 | Moruno | Perales de Tajuña | Madrid | SA |
| 15 | NC077517 | Moruno | Villa del Prado | Madrid | SA |
| 16 | NC077530 | Moruno | Titulcia | Madrid | SA |
| 17 | NC077521 | Moruno | Titulcia | Madrid | SA |
| 19 | NC077516 | Tempranillo | Villa del Prado | Madrid | SA |
| 20 | - | Enano de Arganda | Arganda del Rey | Madrid | SA |
| 21 | - | Enano | Aranjuez | Madrid | SA |
| 22 | - | Moruno | Aranjuez | Madrid | SA |
| 23 | - | De Pera | Aranjuez | Madrid | SA |
| 24 | - | Moruno | Colmenar de Oreja | Madrid | SA |
| 25 | - | Moruno | Palencia | Palencia | RL |
| 26 | - | Tradicional | Villa del Prado | Madrid | SA |
| 27 | - | Antiguo | La Cabrera | Madrid | SA |
| 28 | - | Buitrago | Buitrago del Lozoya | Madrid | SA |
| 29 | - | Del terreno (Picudo) | Robledillo de la Jara | Madrid | SA |
| 30 | - | Del terreno (Rojo) | Robledillo de la Jara | Madrid | SA |
| 31 | - | Del terreno (Sonrosado) | Robledillo de la Jara | Madrid | SA |
| 32 | - | Moruno | Torrelaguna | Madrid | SA |
| 33 | - | Temprano | Rascafría | Madrid | SA |
| 34 | - | Empire | Commercial (hybrid) |  | RC |
| 35 | NC074570 | Moruno mata baja | Chinchón | Madrid | SA |
| 36 | NC083962 | Morado Castellano | Buitrago del Lozoya | Madrid | SA |
| 37 | NC083963 | De la Rosa Rojo | Torremocha del Jarama | Madrid | SA |
| 38 | NC083964 | De la Rosa Morado | Torremocha del Jarama | Madrid | SA |
| 39 | NC083965 | San Pedro | Aranjuez | Madrid | SA |
| 40 | NC083966 | Tres Cantos | Aranjuez | Madrid | SA |
| 41 | NC074977 | De la Rosa |  | Huesca | RL |
| 42 | NC084053 | Muchamiel |  | Alicante | RL |
| 44 | - | Timo | Colmenar de Oreja | Madrid | SA |
| 47 | - | Aplastado morado | Colmenar de Oreja | Madrid | SA |

RL: Reference landrace; RC: Reference commercial variety; SA: Studied accession. Seed collectors and other passport information were found in the Spanish National Inventory of Plant Genetic Resources at <http://wwwx.inia.es/webcrf/CRFesp/Paginaprincipal>.

Table S2 Correlation coefficients between the first three principal components (Fi) and the studied traits.

|  |  |  |  |
| --- | --- | --- | --- |
|  | F1 | F2 | F3 |
| Fruit length | 0.074 | -0.346 | -0.296 |
| Fruit width | 0.837 | 0.099 | -0.396 |
| Fruit weight | 0.760 | -0.039 | -0.375 |
| Fruit shape | -0.624 | -0.617 | 0.149 |
| Fruit skin colour | 0.222 | 0.717 | 0.286 |
| Fruit skin secondary colour | 0.424 | -0.595 | 0.128 |
| Fruit skin intensity colour | 0.486 | 0.535 | 0.326 |
| Fruit green shoulders presence | 0.467 | -0.134 | 0.226 |
| Fruit ribbing intensity | 0.826 | -0.239 | -0.161 |
| Fruit cracking | -0.399 | 0.313 | 0.126 |
| Depression at peduncle end | 0.806 | -0.116 | -0.192 |
| Blossom end shape | -0.266 | -0.631 | 0.000 |
| Peduncle scar size | 0.827 | 0.184 | -0.151 |
| Blossom scar shape | 0.799 | 0.164 | 0.041 |
| Fruit cross-sectional shape | 0.881 | -0.250 | -0.040 |
| Number of locules in fruit | 0.728 | 0.298 | -0.247 |
| Flesh colour | -0.054 | 0.521 | 0.422 |
| Fruit firmness | 0.429 | -0.357 | 0.065 |
| Growth type | 0.076 | -0.376 | -0.012 |
| Foliage density | 0.326 | -0.083 | 0.068 |
| Immature fruit colour | 0.367 | 0.096 | -0.058 |
| Days to flowering | 0.214 | -0.002 | -0.530 |
| Days to maturity | 0.515 | 0.003 | 0.305 |
| pH | 0.533 | 0.031 | 0.142 |
| SSC | 0.180 | 0.065 | 0.576 |
| EC | 0.463 | -0.428 | 0.567 |
| Acidity | 0.305 | -0.286 | 0.398 |
| Lycopene content | 0.110 | -0.090 | -0.082 |
| Yield | 0.295 | -0.170 | 0.000 |
| Consumer appreciation | -0.354 | 0.470 | -0.569 |
| Cumulative Contribution | 27.045 | 38.733 | 47.466 |

Table S3. Frequency distribution of some qualitative traits in the three obtained tomato types.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Character | State | Group 1 | Group 2 | Accession 23 |
| Fruit shape | Flattened (oblate) | 47.71% | 13.88% | 0.00% |
| Slightly flattened | 41.14% | 66.86% | 0.00% |
| Rounded | 3.71% | 17.42% | 0.00% |
| High rounded | 1.14% | 0.28% | 0.00% |
| Heart-shaped | 6.29% | 1.56% | 0.00% |
| Cylindrical (long oblong) | 0.00% | 0.00% | 20.69% |
| Piriform | 0.00% | 0.00% | 79.31% |
| Exterior colour of mature fruit | Green | 0.29% | - | 0.00% |
| Orange | 6.29% | 7.55% | 63.33% |
| Pink | 7.71% | 1.46% | 0.00% |
| Red | 85.71% | 90.99% | 36.67% |
| Ribbing at calyx end | Absent or very weak | 33.43% | 79.34% | 100.00% |
| Weak | 18.57% | 11.54% | 0.00% |
| Intermediate | 16.57% | 5.03% | 0.00% |
| Strong | 31.43% | 4.11% | 0.00% |