**Table S3** Analysis of variance for flour color-related traits in 166 bread wheat cultivars

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | L\* |  | a\* |  | b\* |  | YPC |  |
| Source of variation | *Df* |  | SS | *F* |  | SS | *F* |  | SS | *F* |  | SS | *F* |  |
| Environment | 3 |  | 88.94 | 301.60\*\* |  | 7.33 | 404.07\*\* |  | 176.93 | 570.18\*\* |  | 6.16 | 306.80\*\* |  |
| Replicate | 4 |  | 2.32 | 5.89\*\* |  | 0.11 | 4.40\* |  | 2.84 | 6.87\*\* |  | 0.47 | 17.47\*\* |  |
| Genotype | 165 |  | 1215.60 | 74.95\*\* |  | 156.56 | 156.92\*\* |  | 5414.11 | 317.23\*\* |  | 235.33 | 212.97\*\* |  |
| Genotype × Environment | 495 |  | 196.77 | 4.04\*\* |  | 13.97 | 4.67\*\* |  | 378.18 | 7.39\*\* |  | 6.91 | 2.09\*\* |  |
| Error | 636  |  | 62.51 |  |  | 3.85 |  |  | 65.79 |  |  | 4.26 |  |  |

L\*, flour brightness; a\*, flour redness; b\*, flour yellowness; YPC, yellow pigment content

\* and \*\* significant at *P* =0.001and *P* =0.0001,respectively