

Table S1. Colorimetric parameters of PHBV and its plasticized composites during accelerated weathering for 0 h, 250 h, 500 h.

| <b>Sample name</b>                         | <b>L*</b> | <b>a*</b> | <b>b*</b> | <b>C*</b> | <b>h°</b> | <b>ΔE</b> |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>PHBV 0 h</b>                            | 51        | -3        | -3        | 4         | 225       | 0         |
| <b>PHBV 250 h</b>                          | 56        | -2        | -7        | 7         | 251       | 7         |
| <b>PHBV 500 h</b>                          | 59        | -2        | -7        | 8         | 254       | 9         |
| <b>PHBV20 0 h</b>                          | 50        | -2        | -1        | 3         | 208       | 0         |
| <b>PHBV20 250 h</b>                        | 62        | -2        | -5        | 5         | 246       | 13        |
| <b>PHBV20 500 h</b>                        | 63        | -1        | -3        | 4         | 246       | 13        |
| <b>PHBV20/2RS 0 h</b>                      | 49        | -1        | 0         | 1         | 181       | 0         |
| <b>PHBV20/2RS 250 h</b>                    | 65        | 0         | 4         | 4         | 94        | 17        |
| <b>PHBV20/2RS 500 h</b>                    | 71        | -1        | -1        | 2         | 233       | 22        |
| <b>PHBV20/2RSa 0 h</b>                     | 50        | -2        | -2        | 3         | 223       | 0         |
| <b>PHBV20/2RSa 250 h</b>                   | 68        | -1        | 0         | 1         | 153       | 18        |
| <b>PHBV20/2RSa 500 h</b>                   | 72        | 0         | 0         | 0         | 198       | 23        |
| <b>PHBV20/5RSa 0 h</b>                     | 51        | -2        | 3         | 4         | 114       | 0         |
| <b>PHBV20/5RSa 250 h</b>                   | 64        | 0         | 6         | 6         | 88        | 13        |
| <b>PHBV20/5RSa 500 h</b>                   | 70        | 1         | 7         | 7         | 82        | 19        |
| <b>PHBV20/10RSa 0 h</b>                    | 52        | -1        | 10        | 10        | 94        | 0         |
| <b>PHBV20/10RSa 250 h</b>                  | 62        | 3         | 12        | 12        | 78        | 11        |
| <b>PHBV20/10RSa 500 h</b>                  | 76        | 1         | 5         | 5         | 74        | 25        |
| <b>PHBV20/2RS<sub>NMMO</sub>1.2h 0 h</b>   | 49        | -1        | 3         | 3         | 107       | 0         |
| <b>PHBV20/2RS<sub>NMMO</sub>1.2h 250 h</b> | 63        | -2        | 2         | 2         | 132       | 14        |
| <b>PHBV20/2RS<sub>NMMO</sub>1.2h 500 h</b> | 71        | -1        | -1        | 1         | 216       | 22        |
| <b>PHBV20/2RS<sub>NMMO</sub>5h 0 h</b>     | 46        | -2        | 2         | 3         | 129       | 0         |
| <b>PHBV20/2RS<sub>NMMO</sub>5h 250 h</b>   | 62        | -1        | 4         | 4         | 105       | 16        |
| <b>PHBV20/2RS<sub>NMMO</sub>5h 500 h</b>   | 70        | 0         | 3         | 3         | 100       | 24        |
| <b>PHBV+20/2RS<sub>NMMO</sub>30h 0 h</b>   | 47        | -2        | 2         | 2         | 132       | 0         |
| <b>PHBV20/2RS<sub>NMMO</sub>30h 250 h</b>  | 63        | -1        | 0         | 1         | 191       | 16        |
| <b>PHBV20/2RS<sub>NMMO</sub>30h 500 h</b>  | 64        | -1        | 2         | 2         | 109       | 16        |