Table S1. Limit of detection (LOD) and limit of quantification (LOQ) for the different tested phenolic compounds.

| Compounds                        | LOD (mg/L) | LOQ (mg/L) | R²   |
|----------------------------------|------------|------------|------|
| catechin                         | 11.82      | 35.82      | 0.9989 |
| vanilic acid                     | 9.57       | 29.00      | 0.9996 |
| gallic acid                      | 23.31      | 70.63      | 0.9959 |
| epicatechin + p-coumaric acid    | 12.78      | 38.71      | 0.9986 |
| o-coumaric acid                  | 11.75      | 35.60      | 0.9988 |
| chlorogenic acid                 | 17.71      | 53.67      | 0.9988 |
| ferulic acid                     | 31.19      | 94.53      | 0.9916 |
| ellagic acid                     | 30.65      | 92.88      | 0.9912 |
| narginin                         | 9.89       | 29.96      | 0.9992 |
| hisperidin                       | 36.87      | 111.74     | 0.9996 |
| apigenin                         | 5.31       | 70.63      | 0.9989 |
| resveratrol                      | 32.95      | 99.85      | 0.9909 |
| cinnamic acid                    | 13.99      | 42.40      | 0.9998 |
| rosmarinic acid                  | 14.42      | 43.71      | 0.9970 |
| gallocatechin                    | 13.38      | 38.98      | 0.9989 |
| taxifolin                        | 47.98      | 145.39     | 0.9917 |
| quercetin                        | 21.34      | 64.67      | 0.9961 |
| 3,4 hydroxybenzoic acid          | 9.60       | 29.07      | 0.9993 |
Table S2. Analysis of variance of the first-order polynomial models for spray drying encapsulates from pine bark by-product extracts.

| Coefficient | MC | AA<sub>ABTS</sub> | AAF<sub>ABTS</sub> | TPC |
|-------------|----|-----------------|-----------------|-----|
| Model       | 3.12** | 92.78*** | 89.73*** | 62.38** |
| T           | -0.21* | 2.76* | -19.53*** | 2.74* |
| r           | 0.38** | 5.00*** | -3.54* | 3.98* |
| F           | 0.11 | 6.30*** | 11.17*** | 4.15* |
| F * T       | - | -7.75* | -0.22* | - |
| F * r       | 0.43** | -3.76** | -6.16** | - |
| T * r       | -0.29* | 6.37** | 10.26*** | -5.96** |
| T<sup>2</sup> | 0.80*** | - | - | 15.96** |
| r<sup>2</sup> | - | - | - | -10.3*** |
| F<sup>2</sup> | - | - | - | 6.25* |
| R<sup>2</sup> | 0.906 | 0.934 | 0.933 | 0.856 |
| R<sup>2</sup>-adj | 0.811 | 0.901 | 0.910 | 0.812 |

Adjusted determination coefficient (R<sup>2</sup>-adj) and determination coefficient (R<sup>2</sup>) for evaluating model goodness-of-fit and model equations are also reported. T, temperature (°C); r, ratio lyophilized pine bark extract:Maltodextrin (-); F, flow rate (mL/min); M, moisture content (%); E, encapsulation efficiency (%); TPC, total phenolic content (%); AA, antioxidant activity measured by ABTS assay (%), and FRAP assay (%). * p < 0.05, ** p < 0.01, *** p < 0.001.