**Online Supplementary Materials**

Supplementary Table 1: FTIR PEAK SUMMARY FOR SAMPLES

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |   | GROUP A | GROUP B | GROUP C | GROUP D |
| Peaks and Category  | Compound | Samples | Samples | Sample | Samples |
|   |   | 3 | 4 | 5 | 7 | 8 | 9 | 12 | 13 | 6 | 11 | 10 | 1 | 2 |
| **Fats/Lipids:** |
| 3000--2800 |   |   |   |   |   |   |   |   |   |   |   | x | x | x |
| 1377 | Fats/Lipids, Aspartic, Cystine, Isoleucine, Leucine, Proline |   |   |   |   |   |   |   |   |   |   |   | x | x |
|  | **Saturated Esters:** |
| 1248--43 | Lysine, Methionine, Threonine, Tyrosine |   |   |   |   |   |   |   |   |   |   | x | x |   |
| 1160 | Histidine, Lysine, Proline |   |   |   |   |   |   |   |   |   |   | x | x | x |
| 1073 | Asparagine, Glutamic, Isoleucine, Methionine, Phenylalanine, Tryptophan |   |   |   |   |   |   |   |   |   |   | x | x | x |
| 1048--39 | Arginine, Isoleucine, Lysine, Methionine, Threonine, Tyrosine |   | x | x |   |   |   |   |   | x |   | x | x |   |
|  | **Aromatic Esters:** |
| 1727--24 | Aspartate, Cysteine |   |   |   |   |   |   |   |   |   |   | x |   | x |
| 1713 |   |   |   |   |   |   |   |   |   |   |   |   | x |   |
| 1274--1272 (1310--1250) | Methionine, Serine, Tryptophan |   |   |   |   |   |   |   |   |   |   | x | x | x |
| 1118 | Alanine, Aspartic, Methionine, Tryptophan, Tyrosine |   |   |   |   |   |   |   |   |   |   | x | x | x |
| 750--700 |   |   |   |   |   |   |   |   |   |   |   | x | x | x |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **Amino Acids:** |
| 1672 | Arginine, Asparagine |   |   |   |   |   |   |   |   |   |   | x |   | x |
| 1600 | Many Amino Acids & pectin |   |   |   |   |   |   |   |   |   |   |   |   | x |
| 1583 | Many Amino Acids |   |   |   |   |   |   |   |   |   |   |   |   | x |
| 1580--1571 | Many Amino Acids |   |   |   |   | x | x |   | x | x | x | x |   |   |
| 1567, 1560 | Glutamate | x | x | x | x |   |   | x |   |   | x |   |   |   |
| 1460--1455 | Many Amino Acids |   |   |   |   |   |   |   |   |   |   |   | x | x |
| 1444--1436 | Glycine, Leucine, Phenylalanine, Proline |   |   |   |   |   |   |   |   |   | x | x |   |   |
| 1425--1411 | Many Amino Acids | x | x | x |   |   |   | x | x | x | x | x |   |   |
| 1378--1377 |   |   | x |   |   |   |   |   |   |   | x | x |   |   |
| 1361 | Isoleucine, Tyrosine |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1348--1342 |   | x | x | x |   |   |   | x | x | x | x | x |   |   |
| 1048--39 | Arginine, Isoleucine, Lysine, Methionine, Threonine, Tyrosine |   | x | x |   |   |   |   |   | x |   | x | x |   |
| 1027--1024--18 | Alanine, Arginine, Methionine, Tryptophan | x | x | x | x |   | x | x | x | x | x | x | x | x |
| 1000 | Asparagine, Lysine, Tryptophan | x |   | x | x | x | x | x |   | x |   |   |   |   |
| 980--970 | Arginine, Isoleucine, Leucine, Serine |   | x |   |   |   |   |   |   |   |   | x | x |   |
| 870 | Cystine, Isoleucine, Methionine, Threonine, Tyrosine |   |   |   |   |   |   |   | x |   |   |   | x | x |
| 833 | Asparagine, Histidine, Leucine, Threonine |   |   |   |   |   |   |   |   | x | x |   |   |   |