

Table S5. Correlation analysis between electronic tongue response values and flavor amino acids

Taste	Amino acid	Correlation index	p_value
Aftertaste-A	L-phenylalanine	1	0
Aftertaste-A	L-valine	0.942857143	0.004805
Aftertaste-A	L-Tyrosine	-0.885714286	0.018845
Aftertaste-A	L-Aspartic Acid	0.828571429	0.041563
Aftertaste-A	Gamma-aminobutyric acid	1	0
Aftertaste-A	Glycine	0.942857143	0.004805
Aftertaste-A	Serine	0.942857143	0.004805
Aftertaste-A	L-threonine	0.942857143	0.004805
Aftertaste-A	Ornithine	-0.714285714	0.110787
Aftertaste-A	L-cysteine	-0.714285714	0.110787
Aftertaste-A	L-Arginine	0.6	0.208
Aftertaste-A	L-tryptophan	0.885714286	0.018845
Aftertaste-A	L-glutamine	0.485714286	0.328723
Aftertaste-A	L-Asparagine	-0.828571429	0.041563
Aftertaste-A	L-Glutamate	0.942857143	0.004805
Aftertaste-A	4-Hydroxyproline	-0.771428571	0.072397
Aftertaste-B	L-phenylalanine	0.942857143	0.004805
Aftertaste-B	L-valine	0.828571429	0.041563
Aftertaste-B	L-Tyrosine	-0.771428571	0.072397
Aftertaste-B	L-Aspartic Acid	0.771428571	0.072397
Aftertaste-B	Gamma-aminobutyric acid	0.942857143	0.004805
Aftertaste-B	Glycine	0.828571429	0.041563
Aftertaste-B	Serine	0.828571429	0.041563
Aftertaste-B	L-threonine	0.828571429	0.041563
Aftertaste-B	Ornithine	-0.771428571	0.072397
Aftertaste-B	L-cysteine	-0.6	0.208
Aftertaste-B	L-Arginine	0.657142857	0.156175
Aftertaste-B	L-tryptophan	0.771428571	0.072397
Aftertaste-B	L-glutamine	0.6	0.208
Aftertaste-B	L-Asparagine	-0.771428571	0.072397
Aftertaste-B	L-Glutamate	1	0
Aftertaste-B	4-Hydroxyproline	-0.714285714	0.110787
Astringency	L-phenylalanine	0.81167945	0.049858
Astringency	L-valine	0.927633657	0.007666
Astringency	L-Tyrosine	-0.840668002	0.036058
Astringency	L-Aspartic Acid	0.985610761	0.000309
Astringency	Gamma-aminobutyric acid	0.81167945	0.049858
Astringency	Glycine	0.927633657	0.007666
Astringency	Serine	0.927633657	0.007666
Astringency	L-threonine	0.927633657	0.007666
Astringency	Ornithine	-0.579771036	0.227784
Astringency	L-cysteine	-0.753702346	0.083523

Astringency	L-Arginine	0.753702346	0.083523
Astringency	L-tryptophan	0.927633657	0.007666
Astringency	L-glutamine	0.637748139	0.173071
Astringency	L-Asparagine	-0.724713795	0.103243
Astringency	L-Glutamate	0.753702346	0.083523
Astringency	4-Hydroxyproline	-0.898645105	0.014889
Bitterness	L-phenylalanine	0.794461347	0.059028
Bitterness	L-valine	0.794461347	0.059028
Bitterness	L-Tyrosine	-0.794461347	0.059028
Bitterness	L-Aspartic Acid	0.706187864	0.116807
Bitterness	Gamma-aminobutyric acid	0.794461347	0.059028
Bitterness	Glycine	0.794461347	0.059028
Bitterness	Serine	0.794461347	0.059028
Bitterness	L-threonine	0.794461347	0.059028
Bitterness	Ornithine	-0.88273483	0.01982
Bitterness	L-cysteine	-0.971008312	0.001249
Bitterness	L-Arginine	0.706187864	0.116807
Bitterness	L-tryptophan	0.88273483	0.01982
Bitterness	L-glutamine	0.353093932	0.49237
Bitterness	L-Asparagine	-0.971008312	0.001249
Bitterness	L-Glutamate	0.706187864	0.116807
Bitterness	4-Hydroxyproline	-0.706187864	0.116807
Richness	L-phenylalanine	0.771428571	0.072397
Richness	L-valine	0.657142857	0.156175
Richness	L-Tyrosine	-0.771428571	0.072397
Richness	L-Aspartic Acid	0.6	0.208
Richness	Gamma-aminobutyric acid	0.771428571	0.072397
Richness	Glycine	0.657142857	0.156175
Richness	Serine	0.657142857	0.156175
Richness	L-threonine	0.657142857	0.156175
Richness	Ornithine	-0.942857143	0.004805
Richness	L-cysteine	-0.771428571	0.072397
Richness	L-Arginine	0.828571429	0.041563
Richness	L-tryptophan	0.6	0.208
Richness	L-glutamine	0.657142857	0.156175
Richness	L-Asparagine	-0.771428571	0.072397
Richness	L-Glutamate	0.828571429	0.041563
Richness	4-Hydroxyproline	-0.714285714	0.110787
Saltiness	L-phenylalanine	0.942857143	0.004805
Saltiness	L-valine	0.885714286	0.018845
Saltiness	L-Tyrosine	-0.942857143	0.004805
Saltiness	L-Aspartic Acid	0.771428571	0.072397
Saltiness	Gamma-aminobutyric acid	0.942857143	0.004805
Saltiness	Glycine	0.885714286	0.018845

Saltiness	Serine	0.885714286	0.018845
Saltiness	L-threonine	0.885714286	0.018845
Saltiness	Ornithine	-0.771428571	0.072397
Saltiness	L-cysteine	-0.771428571	0.072397
Saltiness	L-Arginine	0.714285714	0.110787
Saltiness	L-tryptophan	0.771428571	0.072397
Saltiness	L-glutamine	0.6	0.208
Saltiness	L-Asparagine	-0.771428571	0.072397
Saltiness	L-Glutamate	0.885714286	0.018845
Saltiness	4-Hydroxyproline	-0.828571429	0.041563
Sourness	L-phenylalanine	0.942857143	0.004805
Sourness	L-valine	1	0
Sourness	L-Tyrosine	-0.942857143	0.004805
Sourness	L-Aspartic Acid	0.942857143	0.004805
Sourness	Gamma-aminobutyric acid	0.942857143	0.004805
Sourness	Glycine	1	0
Sourness	Serine	1	0
Sourness	L-threonine	1	0
Sourness	Ornithine	-0.6	0.208
Sourness	L-cysteine	-0.771428571	0.072397
Sourness	L-Arginine	0.657142857	0.156175
Sourness	L-tryptophan	0.942857143	0.004805
Sourness	L-glutamine	0.542857143	0.265703
Sourness	L-Asparagine	-0.771428571	0.072397
Sourness	L-Glutamate	0.828571429	0.041563
Sourness	4-Hydroxyproline	-0.885714286	0.018845
Sweetness	L-phenylalanine	-0.771428571	0.072397
Sweetness	L-valine	-0.714285714	0.110787
Sweetness	L-Tyrosine	0.6	0.208
Sweetness	L-Aspartic Acid	-0.771428571	0.072397
Sweetness	Gamma-aminobutyric acid	-0.771428571	0.072397
Sweetness	Glycine	-0.714285714	0.110787
Sweetness	Serine	-0.714285714	0.110787
Sweetness	L-threonine	-0.714285714	0.110787
Sweetness	Ornithine	0.771428571	0.072397
Sweetness	L-cysteine	0.6	0.208
Sweetness	L-Arginine	-0.714285714	0.110787
Sweetness	L-tryptophan	-0.771428571	0.072397
Sweetness	L-glutamine	-0.6	0.208
Sweetness	L-Asparagine	0.771428571	0.072397
Sweetness	L-Glutamate	-0.885714286	0.018845
Sweetness	4-Hydroxyproline	0.657142857	0.156175
Umami	L-phenylalanine	-0.6	0.208
Umami	L-valine	-0.714285714	0.110787

Umami	L-Tyrosine	0.771428571	0.072397
Umami	L-Aspartic Acid	-0.771428571	0.072397
Umami	Gamma-aminobutyric acid	-0.6	0.208
Umami	Glycine	-0.714285714	0.110787
Umami	Serine	-0.714285714	0.110787
Umami	L-threonine	-0.714285714	0.110787
Umami	Ornithine	0.771428571	0.072397
Umami	L-cysteine	0.942857143	0.004805
Umami	L-Arginine	-0.885714286	0.018845
Umami	L-tryptophan	-0.771428571	0.072397
Umami	L-glutamine	-0.6	0.208
Umami	L-Asparagine	0.771428571	0.072397
Umami	L-Glutamate	-0.542857143	0.265703
Umami	4-Hydroxyproline	0.828571429	0.041563
