

Supplementary data

Supplement Table S1

Changes of amino acid contents in the acetic acid fermentation of Shanxi aged vinegar.

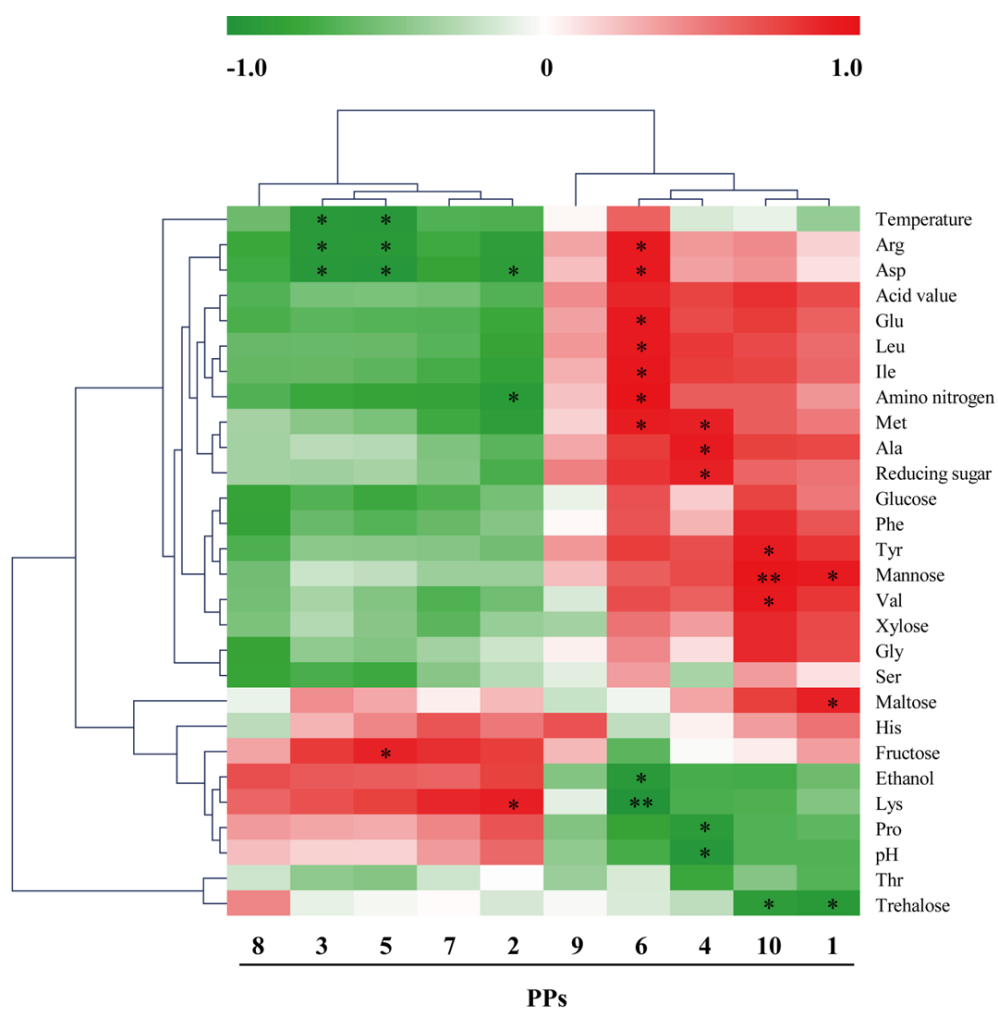
Amino acid	Content (mg/100g Vinegar fermented grains)				
	AAF 1d	AAF 3d	AAF 5d	AAF 7d	AAF 9d
Glu	25.067±0.611	36.911±0.732	42.491±0.689	48.971±0.554	54.010±0.012
Gly	9.412±0.002	10.334±0.113	9.093±0.211	10.131±0.003	11.402±0.124
Ala	29.322±0.547	28.393±0.598	35.093±0.632	36.813±0.715	38.280±0.498
Val	20.950±0.496	22.394±0.229	23.161±0.123	23.153±0.586	28.919±0.092
Met	5.384±0.006	5.693±0.359	6.782±0.218	6.527±0.682	6.897±0.159
Ile	13.135±0.003	15.251±0.025	17.245±0.584	17.827±0.129	18.998±0.668
Leu	36.160±0.485	40.648±0.761	45.988±0.661	48.360±0.527	49.397±0.573
Phe	13.176±0.724	14.516±0.157	13.622±0.548	14.269±0.224	15.749±0.398
Thr	21.165±0.235	26.136±0.824	21.697±0.817	19.715±0.904	20.768±0.700
Asp	11.270±0.009	36.415±0.001	35.479±0.465	35.164±0.398	37.577±0.599

Ser	20.355±0.167	26.111±1.020	20.892±0.326	21.925±0.236	24.830±0.699
Pro	23.676±0.257	23.700±0.324	15.535±0.339	12.355±0.240	13.434±0.541
Tyr	6.104±0.098	7.216±0.054	7.877±0.257	10.460±0.281	11.732±0.154
His	25.135±0.480	24.149±0.509	23.600±0.138	25.743±0.367	24.810±0.684
Lys	28.904±0.831	22.404±0.952	18.833±0.157	20.179±0.330	15.639±0.601
Arg	20.575±0.021	42.034±0.001	41.268±0.414	43.763±0.365	43.853±0.209

Supplement Table S2

Changes of reducing sugar content in the acetic acid fermentation of Shanxi aged vinegar.

Reducing sugar	Content (g/100g Vinegar fermented grains)				
	AAF 1d	AAF 3d	AAF 5d	AAF 7d	AAF 9d
Xylose	0.407±0.043	0.460±0.003	0.433±0.056	0.415±0.075	0.615±0.055
Fructose	0.332±0.038	0.092±0.001	0.100±0.015	0.250±0.032	0.179±0.014
Mannose	0.864±0.084	0.488±0.048	1.381±0.013	3.588±0.035	5.726±0.054
Glucose	0.073±0.004	0.085±0.006	0.078±0.005	0.080±0.014	0.091±0.016
Maltose	0.241±0.013	0.212±0.052	0.212±0.034	0.225±0.024	0.259±0.011
Trehalose	0.208±.2033	0.279±0.027	0.389±0.038	0.203±0.021	0.003±0.003



Supplement Figure S1. Spearman correlation between physicochemical and polyphenols. Red and green indicate positive correlation and negative correlation respectively, and the shadow of color indicates the correlation coefficient between environmental factors and polyphenols; *p<0.05; **p<0.01.