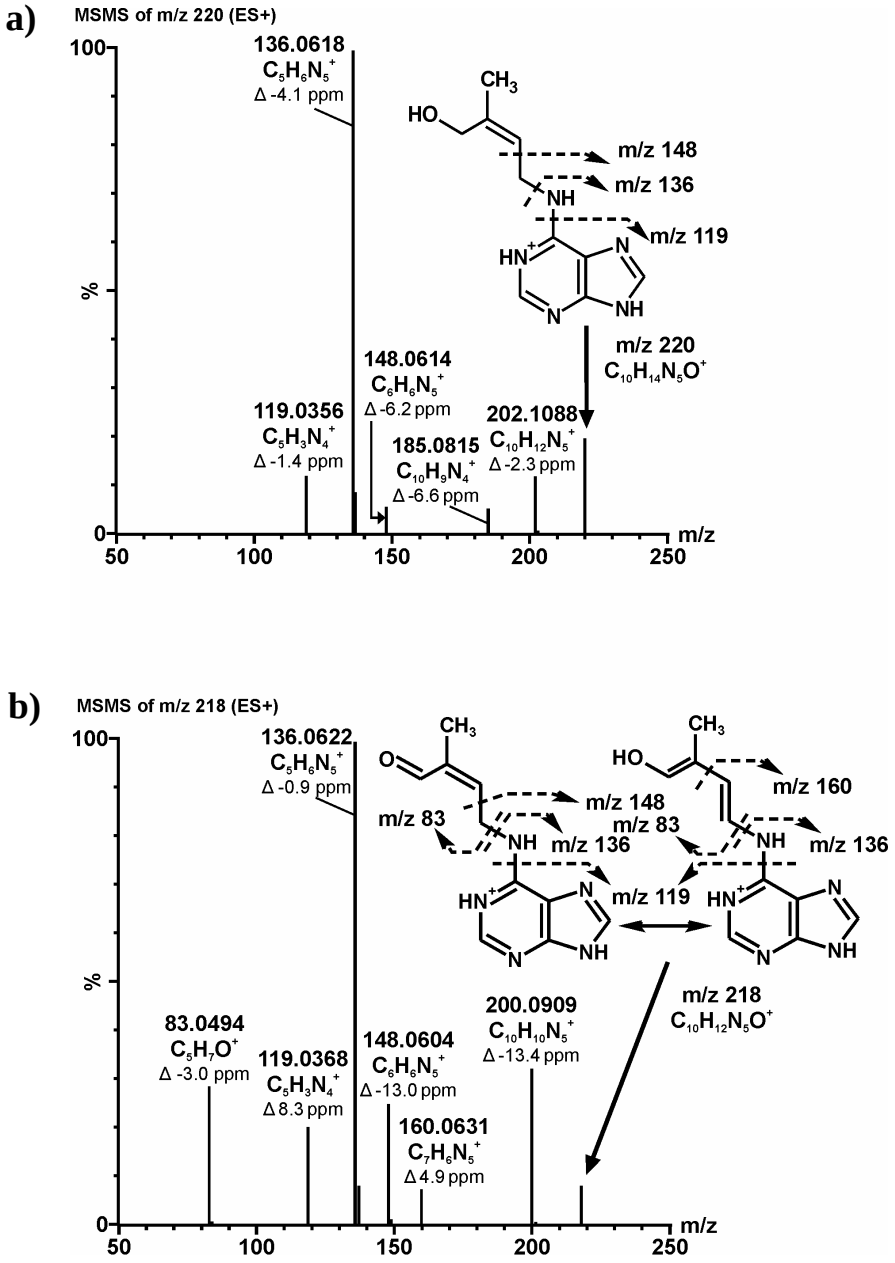
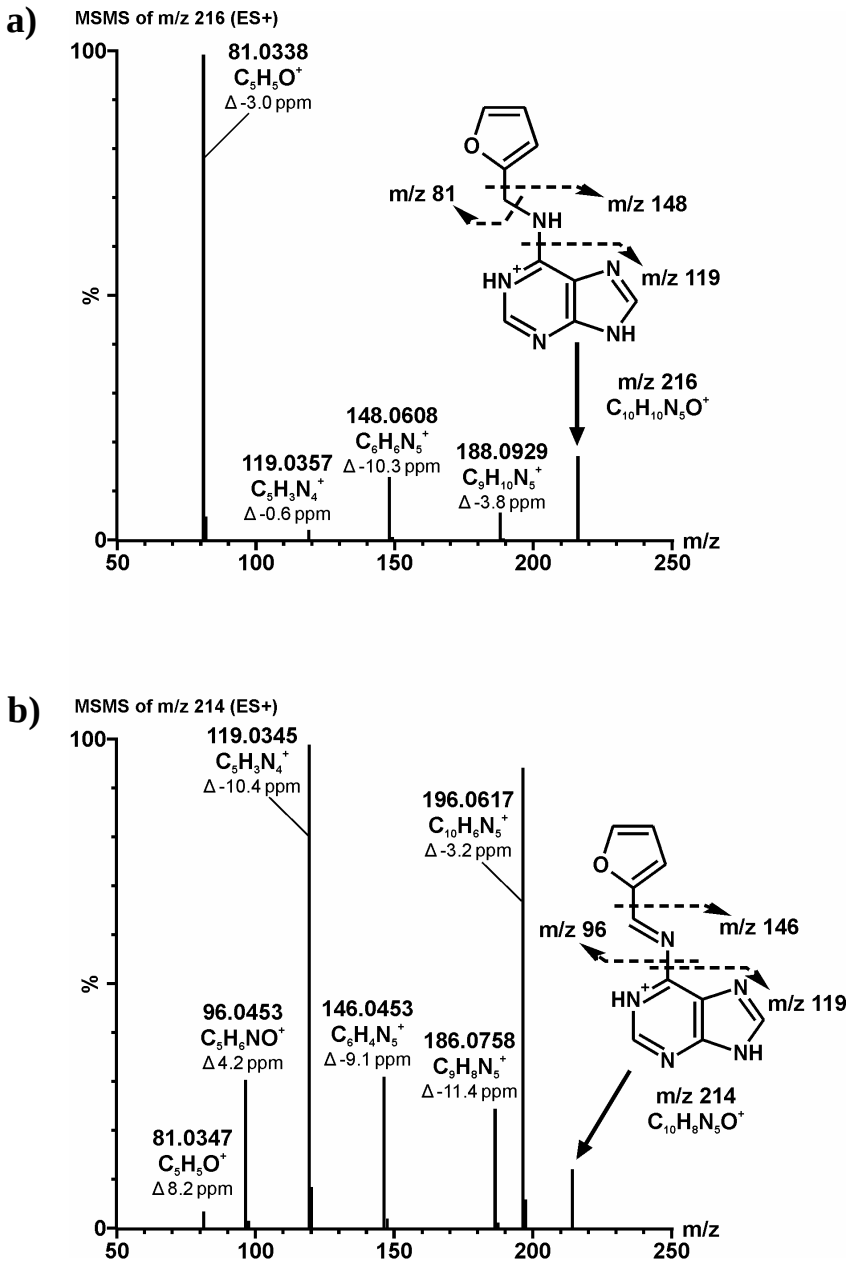
Supplement 1 Absorption maxima and extinction coefficients of some cytokinins and cytokinin-derived aldehydes

Absorption spectra were measured in 75 mM imidazole/HCl buffer, pH 6.5 and in 50 mM Tris/HCl buffer, pH 8.0. 3-Methyl-2-butenal, furfural and 4-hydroxybenzaldehyde are the products of enzymatic degradation of isopentenyladenine, kinetin and *p*-topolin, respectively.

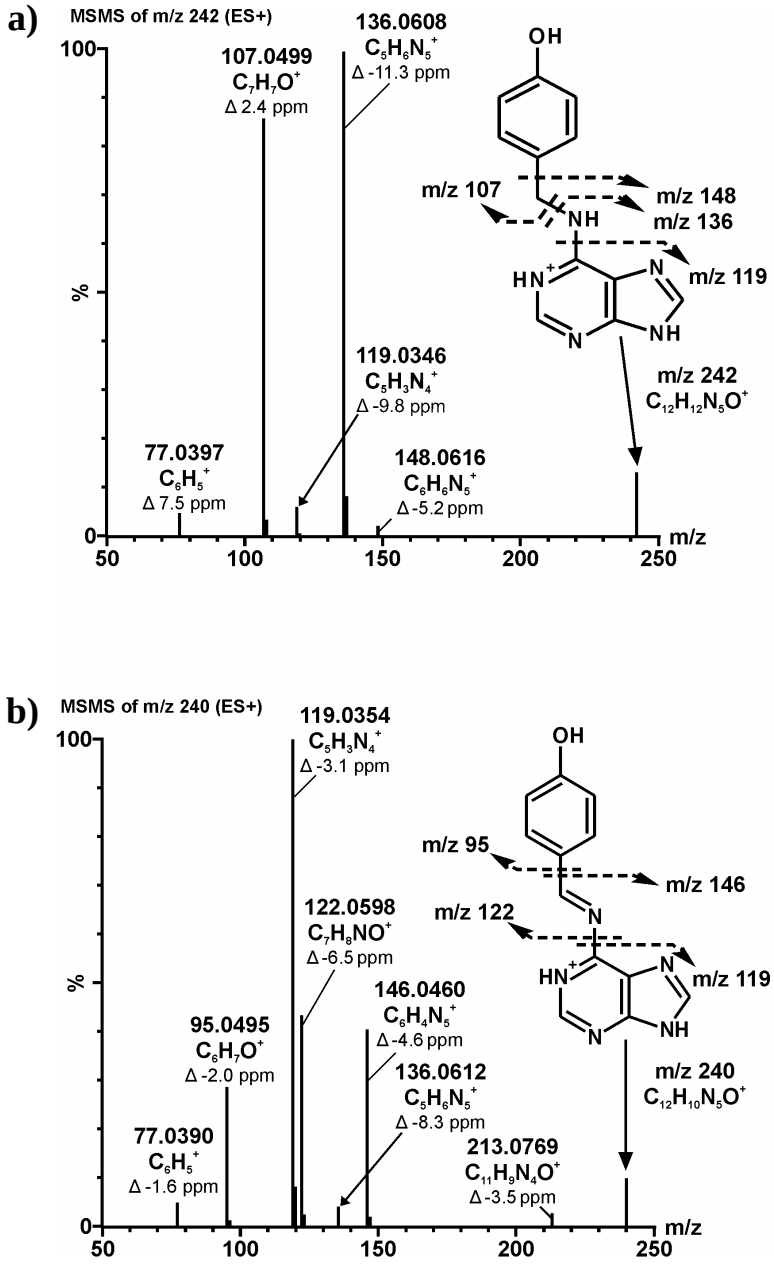
Compound	pH 6.5		pH 8.0	
	λ_{max} (nm)	ε ($M^{-1}cm^{-1}$)	λ_{max} (nm)	ε ($M^{-1}cm^{-1}$)
Isopentenyladenine	269.5	18200	269.0	17800
			223.5	32700
p-Topolin	269.5	19300	269.5	19700
			224.5	34000
3-Methyl-2-butenal	241.0	12400	241.0	12400
			219.0	33100
			219.0	32200
Furfural	277.0	15000	277.0	14500
			218.5	30200
4-Hydroxybenzaldehyde	327.0	2800	330.0	17900
	284.0	13900	293.0	7800
			219.0	31700



Supplement 2 MS/MS analysis of ZmCKX1 (1.5 µM) reaction with cytokinins: (**a**) *trans*-zeatin (50 µM), (**b**) *trans*-zeatin[-2H] intermediate.



Supplement 3 MS/MS analysis of ZmCKX1 (1.5 μM) reaction with cytokinins: (**a**) kinetin (50 μM), (**b**) kinetin[-2H] intermediate.



Supplement 4 MS/MS analysis of ZmCKX1 (1.5 μM) reaction with cytokinins: (**a**) *p*-topolin (50 μM), and (**b**) *p*-topolin[-2H] intermediate.