

Table S-III

Band [#]	cm ⁻¹	Vibrational origin	Ref. ^{##}
26	1014	C=O bending in cytosine & guanine	48
27	1022	Ring deformation in uracil	48
28	1043	S=O stretching in methionine sulfoxide	47
29	1058	C–C stretching in amino acid residues	45
30	1070	C–C stretching in amino acid residues	45
31	1083	Pyrrole ring deformation in RNA adenine C–N–H ₂ asymmetric bending in arginine H-scissoring of pyrrole ring in tryptophan	45,48
32	1106	O–P–O stretching in RNA backbone NH ₃ asymmetric rocking in histidine	11,45
33	1125	C–S–C stretching in methionine (CH ₃ side; <i>trans</i>) H-scissoring of benzene ring in tryptophan	45,47
33*	1141	C–S–C stretching in methionine (CH ₃ side; thioether configuration)	47
34	1152	Benzene ring breathing in RNA adenine	48
35	1172	C–H stretching in methionine	45
36	1191	C–H bending and C–O stretching in phenylalanine	45
37	1201	Amide III	11

[#]Numbers and colors are the same as those of the sub-bands shown in Fig. 6 of the main paper.

^{##}Reference numbers are the same as those listed in the main paper.