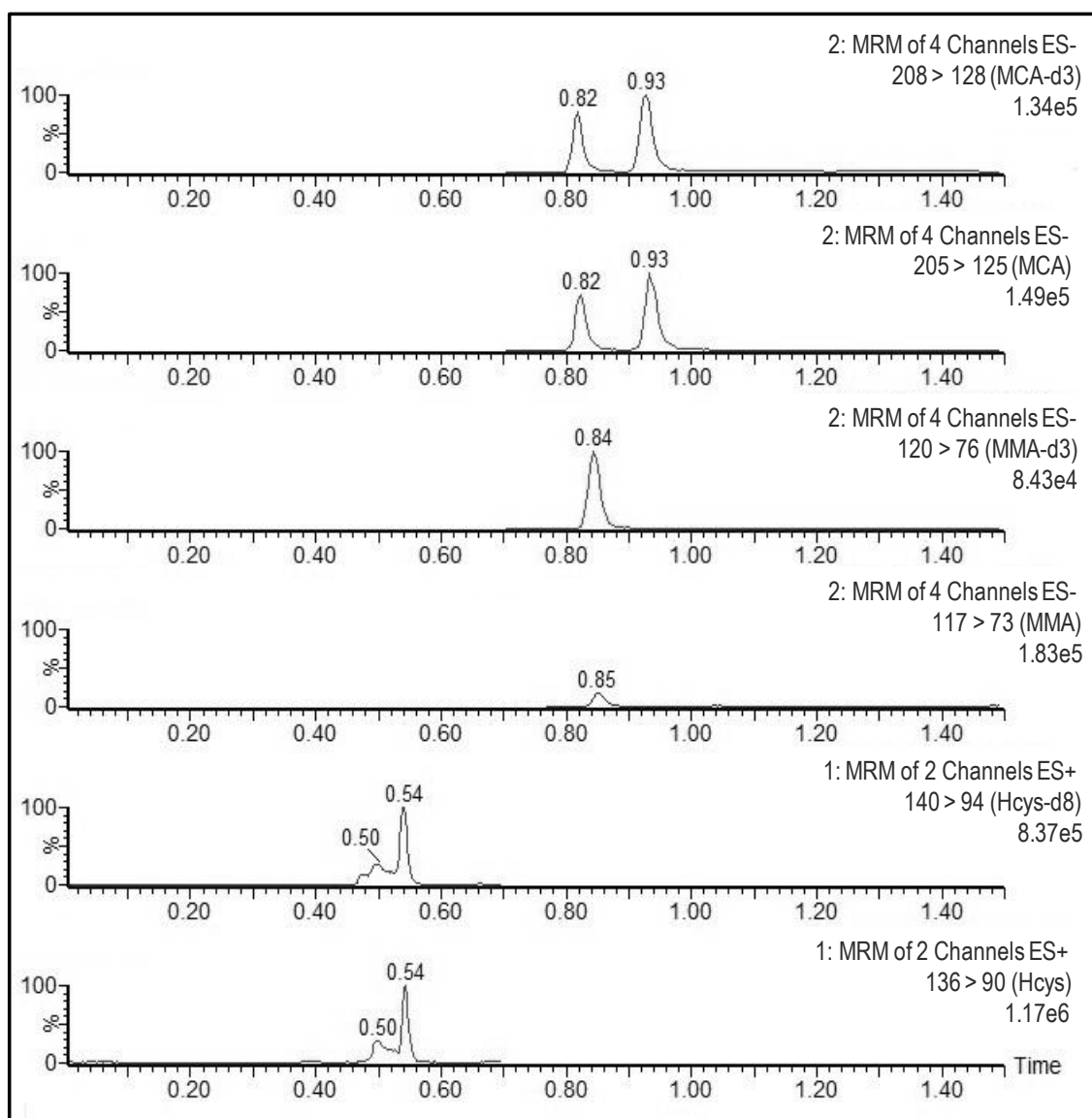


**Additional file 5.** MRM of the extracted ion chromatograms of methylmalonic acid homocysteine and methylcitric acid together with the corresponding deuterated compounds.



Hcys: homocysteine; Hcys-d<sub>8</sub>: homocysteine (3,3,3',3',4,4,4',4'-d<sub>8</sub>); MCA: methylcitric acid; MCA-d<sub>3</sub>: MCA-d<sub>3</sub>: 2-methyl-d<sub>3</sub>-citric acid; MMA: methylmalonic acid; MMA-d<sub>3</sub>: isotopically labeled methylmalonic acid; MRM: multiple reaction monitoring.