



15				'hdd2coa[c] <=> hdd2coa[x] '	
15					
coalm + c8cm(m <=> crn(m) + ccoalm ' crn(m + c8cm(e <=> crn(e) + c8cm(m) ' hz/cm + c4cm(e <=> crn(e) + c8cm(m) ' hz/cm + coalm + cam(m) + c					
cm(m) + c8cm(c) <=> cm(c) + c8cm(m)' h2c(m) + had(m) + cod(m) + fad(m) + cad(m) - h(m) + had(h(m) + accoa(m) + fadh2(m) + hdcoa(m)' h(m) + had(h(m) + code(m) + fad(m) - cod(f) + dec8coa(m)' h2c(m) + had(m) + cod(m) + fad(m) - cad(f) + dec8coa(m)' h2c(m) + had(m) + cod(m) + fad(m) + telddcoa(m) - h(m) + hadh(m) + accoa(m) + fadh2(m) + tiddedcoa(m)' h2c(m) + had(m) + cod(m) + fad(m) + telddcoa(m) -> h(m) + hadh(m) + accoa(m) + fadh2(m) + telddcoa(m)' h2c(m) + had(m) + cod(m) + fad(m) + thexddcoa(m) -> h(m) + hadh(m) + accoa(m) + fadh2(m) + thexddcoa(m)' h2c(m) + had(m) + cod(m) + fad(m) + had(coa(m) -> h(m) + hadh(m) + accoa(m) + fadh2(m) + thexddcoa(m)' cod(m) + codecern(m)' - coa(m) + h0c3c3(m)' cod(m) + codecern(m)' - coa(m) + h0c3c3(m)' con(m) + M0c3d(m) - coa(m) + M0c3c3(m)' con(m) + M0123(m) - coa(m) + M01775(c)' con(m) + M0123(m) - coa(m) + M01775(c)' con(m) + M0123(m) - coa(m) + M01775(m)' con(m) + M0010(m) - coa(m) + M0010(m)' con(m) + M0010(m) - coa(m) + M0010(m)' con(m) + M0010(m) - coa(m) + M01726(c)' con(m) + M0010(d) - coa(m) + M01726(m)' coa(x) + H0014(d)(x) - accoa(x) + H0014(x) - accoa(x) + coa(x) - accoa(x) + coa(x) - accoa(x)					15
h2o[m] + nad[m] + coa[m] + fad[m] + octd11ecoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + hdcoa[m] ' h[m] + nadph[m] + coa[m] + caa[m] + caa[m] + adedizeoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + teldedizeoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + teldedicoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + teldedicoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + teldedicoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + teldedicoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + teldedicoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + teldedicoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddicoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + teldedicoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddicoa[m] ' 'coa[m] + coalecern[m] -> cor[m] + coalecern[m] ' coalecern[c] -> coalecern[m] -> cor[m] + dold1ecoa[m] ' 'crn[c] + M0175[m] -> coa[m] + M02638[c] ' 'crn[m] + M0175[m] -> coa[m] + M0175[m] ' 'crn[m] + M00122[c] -> crn[c] + M00122[m] ' 'crn[m] + M00102[c] -> crn[c] + M00122[m] ' 'crn[m] + M00100[c] -> coa[m] + M01726[m] ' 'coa[x] + coa[x] + coa[x] - h2o2[x] + HC01405[x] ' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'nad[x] + Coa[x] + h2o[x] + teldricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'nad[x] + coa[x] + h2o[x] + teldricoa[x] -> h[x] + nadh[x] + accoa[x] + b2o2[x] + 3dodricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4bexdietoa[x] ' 'hxl + nadph[x] + coa[x] + h2					
h[m] + nadph[m] + ctdecdcoa[m] -> nadp[m] + dece3coa[m] h2c[m] + nad[m] + coa[m] + tddedi2coa[m] -> h[m] + nadh[m] + accoa[m] + tdec4ecoa[m] ' tddedicoa[m] -> tddedi2coa[m] -> h[m] + nadh[m] + accoa[m] + tddedicoa[m] ' h2c[m] + nad[m] + coa[m] + fad[m] + ttetddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' h2c[m] + nad[m] + coa[m] + fad[m] + ttetddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' h2c[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' coa[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' coa[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddcoa[m] ' coa[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddcoa[m] ' coa[m] + ndoceaern[m] + coa[m] + thexddcoa[m] ' corn[m] + thoxdesaern[m] + thoxdesaern[m] + thoxdesaern[m] + thoxdesaern[m] + thoxdesaern[m] + thoxdesaern[m] ' corn[m] + thoxdesaern[m] + thoxdesaer					
h2o[m] + nad[m] + coa[m] + tddedi2coa[m] -> h[m] + nadh[m] + accoa[m] + tdec4ecoa[m] ' tddedicoa[m] -> tddedi2coa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + tletddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + tddedicoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + tletddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + tletddcoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + tletddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + tletddcoa[m] ' 'ocdecern[c] <=> ocdecern[m] ' 'oca[m] + odececrn[m] <=> crn[m] + octd11ecoa[m] ' 'crn[c] + M02638[m] <=> crn[m] + M02638[c] ' 'crn[m] + M001775[m] <=> crn[m] + M00775[c] ' 'crn[m] + M01775[m] <=> crn[m] + M01775[c] ' 'crn[m] + M01775[m] <=> crn[m] + M01775[m] ' 'crn[m] + M0103[m] <=> coa[m] + M01775[m] ' 'crn[m] + M0010[c] <=> crn[m] + M0010[m] ' 'crn[m] + M0010[m] <=> coa[m] + M0122[m] ' 'crn[m] + M0010[m] <=> coa[m] + M01726[m] ' 'crn[m] + M0010[m] <=> coa[m] + M01726[m] ' 'crn[m] + M0006[m] <=> coa					
"Iddedicoa[m] -> tddedi2coa[m] "12c[m] + nad[m] + coa[m] + fad[m] + ttetddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] "12c[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] "12c[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] "12c[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttexddcoa[m] "12c[m] + nad[m] + coa[m] + fadm2[m] + thexddcoa[m] "12c[m] + nad[m] + coa[m] + fadh2[m] + thexddcoa[m] "12c[m] + M00268[m] -> coa[m] + M002688[m] "12c[m] + M00116[m] -> coa[m] + M00175[m] "12c[m] + M00128[m] -> coa[m] + M001728[m] "12c[m] + M00102[m] -> coa[m] + M00112[m] "12c[m] + M00101[m] -> coa[m] + M00112[m] "12c[m] + M00104[m] -> coa[m] + M00112[m] "12c[m] + M00104[m] -> coa[m] + M00112[m] "12c[m] + M00104[m] -> coa[m] + M00110[m] "12c[m] + M00104[m] -> coa[m] + M					10
1.20[m] + nad[m] + coa[m] + fad[m] + ttetddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + nad[m] + coa[m] + fad[m] + intexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + nad[m] + coa[m] + fad[m] + intexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + nad[m] + coa[m] + fad[m] + intexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + nad[m] + coa[m] + fad[m] + intexddcoa[m] ' 1.20[m] + ocdececrn[m] - coa[m] + fad[m] + fadh2[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + ocdececrn[m] - coa[m] + fad[m] + fadh2[m] + fadh2[m] + fadh2[m] + ttetddcoa[m] ' 1.20[m] + fadh2[m] + fad[m] + fad[m] + fadh2[m]					
h2o[m] + nad[m] + coa[m] + fad[m] + thexddcoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + ttetddcoa[m] ' h2o[m] + nad[m] + coa[m] + fad[m] + ineldccoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddcoa[m] ' cocdecerro[c] <-> codececrn[m] ' 'corlo[-] + M02638[m] <-> corlom] + M02638[m] ' 'crn[c] + M02638[m] <-> corlom] + M02638[m] ' 'crn[c] + M01775[m] <-> corlom] + M02638[c] ' 'crn[m] + M00110[m] <-> corlom] + M01775[c] ' 'crn[m] + M00122[c] <-> corlom] + M01775[m] ' 'crn[m] + M00122[c] <-> corlom] + M00122[m] ' 'crn[m] + M00102[m] <-> coa[m] + M00102[m] ' 'crn[m] + M00100[c] <-> corlom] + M00102[m] ' 'crn[m] + M00100[c] <-> corlom] + M00100[m] ' 'crn[c] + M01726[m] <-> coa[m] + M00100[m] ' 'crn[m] + M00100[m] <-> coa[m] + M00100[m] ' 'crn[m] + M00104[m] <-> coa[m] + M01726[n] ' 'occoa[x] + co[x] + Fc01405[x] ' 'nad[x] + HC01405[x] -> h(x] + nadh[x] + HC01406[x] ' 'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad[x] + coa[x] + h2o[x] + tmdnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'nad[x] + coa[x] + h2o[x] + Zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'nad[x] + coa[x] + h2o[x] + Zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'nad[x] + coa[x] + h2o[x] + Zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + Zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + Zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + zdecdicoa[x] -> h[x] + nadh[x] + accoa[x] +					
'h2o(m) + nad[m] + coa[m] + fad[m] + ineldccoa[m] -> h[m] + nadh[m] + accoa[m] + fadh2[m] + thexddcoa[m] ' 'cocleecern[e] <=> ocdeecern[m]' 'coa[m] + ocdeecern[m] <=> crn[m] + octd11ecoa[m] ' 'crn[c] + M02638[m] <=> crn[m] + M02638[c] ' 'crn[m] + M00136[m] <=> crn[m] + M0176[c] ' 'crn[m] + M01136[m] <=> coa[m] + M01775[m] ' 'crn[m] + M01136[m] <=> coa[m] + M01775[m] ' 'crn[m] + M00122[c] <=> crn[c] + M00102[m] ' 'crn[m] + M00122[c] <=> crn[c] + M00100[m] ' 'crn[m] + M00100[c] <=> crn[c] + M00100[m] ' 'crn[m] + M00100[c] <=> crn[c] + M00100[m] ' 'crn[m] + M00006[m] <=> coa[m] + M01726[c] ' 'crn[m] + H001405[x] -> h(x] + nadh(x] + HC01406[x] ' 'oca[x] + HC01405[x] -> h(x] + nadh[x] + HC01406[x] ' 'ad[x] + coa[x] + h2o[x] + trundnccoa[x] ' 'nad[x] + coa[x] + h2o[x] + trundnccoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decticoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decticoa[x] '> h[x] + nadh[x] + accoa[x] + bcc5coa[x] ' '3decticoa[x] -> 2decticoa[x] -> h[x] + nadh[x] + accoa[x] + bcc5coa[x] ' '3decticoa[x] -> 2dottricoa[x] '> nad[x] + coa[x] + h2o[x] + + h					
'cocdececrn[c] <=> codececrn[m] ' 'coalm + oddececrn[m] <=> crn[m] + odd11ecoa[m] ' 'crn[c] + M02638[m] <=> crn[m] + M02638[c] ' 'crn[m] + M00116[m] <=> coalm + M02638[m] ' 'crn[c] + M01775[m] <=> crn[m] + M01775[c] ' 'crn[m] + M01236[m] <=> coalm + M01775[m] ' 'crn[m] + M01236[m] <=> coalm + M00122[m] ' 'crn[m] + M00122[c] <=> crn[c] + M00122[m] ' 'crn[m] + M00122[c] <=> crn[c] + M00102[m] ' 'crn[m] + M00102[m] <=> coalm + M00102[m] ' 'crn[m] + M00101[m] <=> coalm + M00102[m] ' 'crn[m] + M00106[m] <=> crn[m] + M00106[m] ' 'crn[m] + M00006[m] <=> crn[m] + M01726[m] ' 'occoa[x] + o2[x] >> h202[x] + H011415[x] ' 'h2c[x] + H001405[x] >> h2c[x] + H001405[x] ' 'rad[x] + H001405[x] >> h[x] + nadh[x] + H01406[x] ' 'coa[x] + H01406[x] >= accoa[x] + hxcoa[x] ' 'rad[x] + coa[x] + h2c[x] + trndnccoa[x] >> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'rad[x] + coa[x] + h2c[x] + dectricoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dectricoa[x] >> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dectricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 3dodtricoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 3dodtricoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 3dodtricoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 3dodtricoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 4dextdetcoa[x] ' 'rad[x] + coa[x] + h2c[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2c2[x] + 4dextdetcoa[x] ' 'rad[x] + coa[x] + h2c[x] + h2cx[x] + strdnccoa[x] ' 'rad[x] + coa[x] + h2c[x] + h2cx[x] + strdnccoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + h2cx[x] + hxdpencoa[x] ' 'rad[x] + coa[x] + h2cx[x] + hxdpen					5
coa[m] + ocdececn[m] <=> crn[m] + octd11ecoa[m] ' crn[c] + M02638[m] <=> crn[m] + M02638[c] ' crn[m] + M00116[m] <=> coa[m] + M02638[m] ' crn[m] + M01775[m] <=> crn[m] + M01775[c] ' crn[m] + M0122[m] <=> coa[m] + M01775[m] ' crn[m] + M0122[m] <=> coa[m] + M01775[m] ' crn[m] + M0122[m] <=> coa[m] + M0175[m] ' crn[m] + M00102[m] <=> coa[m] + M00102[m] ' crn[m] + M00100[c] <=> crn[c] + M00100[m] ' crn[m] + M00100[m] <=> coa[m] + M00100[m] ' crn[m] + M00106[m] <=> coa[m] + M00100[m] ' crn[m] + M00006[m] <=> coa[m] + M01726[n] ' occoa[x] + oz[x] -> h2o2[x] + HC01415[x] ' h2o[x] + HC01405[x] -> h(x] + nadh[x] + HC01406[x] ' coa[x] + HC01405[x] -> h(x] + nadh[x] + HC01406[x] ' coa[x] + HC01405[x] -> h(x] + nadh[x] + nadh[x] + accoa[x] + strdnccoa[x] ' trundnccoa[c] <=> trundnccoa[x] ' voz[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' nad[x] + coa[x] + h2o[x] + zdecdicoa[x] '-> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' decdicoa[x] -> 2decdicoa[x] '-> h2decdicoa[x] '-> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] '-> had[x] + coa[x] + h2o[x] + 2dodtricoa[x] '-> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] '-> had[x] + coa[x] + h2o[x] + b2o[x] + b					
crn[c] + M02638[m]					
crn[m] + M00116[m] <=> coa[m] + M02638[m] ' crn[c] + M01775[m] <=> coa[m] + M01775[c] ' crn[m] + M01236[m] <=> coa[m] + M01775[m] ' crn[m] + M01236[m] <=> coa[m] + M01722[m] ' crn[m] + M00122[c] <=> crn[c] + M00122[m] ' crn[m] + M00123[m] <=> coa[m] + M00102[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[m] + M00106[m] <=> coa[m] + M01726[m] ' cocoa[x] + o2[x] -> h2o2[x] + HC01405[x] ' cocoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' h2o3[x] + HC01415[x] -> h1[x] + hadh[x] + HC01406[x] ' coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad(x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'ad(x] + coa[x] + h2o[x] + tandhcoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'ad(x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'ad(x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'ad(x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'ad(x] + coa[x] + h2o[x] + 2dedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ad(x] + coa[x] + h2o[x] + 2dedricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ad(x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ad(x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ad(x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'ad(x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'ad(x] + coa[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'ad(x] + coa[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexdtetcoa[x] ' 'hexe3coa[x] -> hxeca[x] ' 'ad(x] + coa[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					=
crn[c] + M01775[m]					0
crn[m] + M01236[m] <=> coa[m] + M01775[m] ' crn[m] + M00122[c] <=> crn[c] + M00122[m] ' crn[m] + M00122[m] <=> coa[m] + M00102[m] ' crn[m] + M00100[c] <=> crn[c] + M00100[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[m] + M00101[m] <=> coa[m] + M01726[c] ' crn[m] + M0006[m] <=> coa[m] + M01726[m] ' 'occoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' 'h2o[x] + HC01415[x] -> h[x] + nadh[x] + HC01406[x] ' 'coa[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x] ' 'coa[x] + HC01406[x] -> accoa[x] + h2o1[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'nad[x] + coa[x] + h2o[x] + trnndnccoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'add[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'add[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'add[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'add[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ada[x] + coa[x] + h2o[x] + 2bcxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ada[x] + coa[x] + h2o[x] + 2bcxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ada[x] + coa[x] + h2o[x] + 2bcxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'ada[x] + coa[x] + h2o[x] + 2bcxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4dextletcoa[x] ' 'ada[x] + coa[x] + h2o[x] + 2bcxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4dextletcoa[x] ' 'aad[x] + coa[x] + h2o[x] + b2o[x] + bxtletcoa[x] ' 'aad[x] + coa[x] + h2o[x] + h2o[x] + bxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + dextletcoa[x] ' 'aad[x] + coa[x] + h2o[x] + h2o[x] + bxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + dextletcoa[x] ' 'aad[x] + coa[x] + h2o[x] + h2o[x] + bxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + dextletcoa[x] ' 'aad[x] + coa[x] + h2o[x] + b2o[x] + bxtletcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2					
crn[m] + M00122[c] <=> crn[c] + M00122[m] ' crn[m] + M0013m] <=> coa[m] + M00102[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[c] + M01726[m] <=> coa[m] + M001726[c] ' crn[m] + M00006[m] <=> coa[m] + M01726[m] ' occoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' h2o[x] + HC01415[x] -> hC01405[x] ' 'had[x] + HC01406[x] -> h[x] + hadh[x] + HC01406[x] ' coa[x] + HC01406[x] -> h[x] + hadh[x] + HC01406[x] ' coa[x] + HC01406[x] -> h2o[x] + hxcoa[x] ' 'had[x] + coa[x] + h2o[x] + trnndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'had[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'decdroca[x] -> 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' 'dedcdicoa[x] -> 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'had[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'daddtricoa[x] -> 2decdtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'had[x] + coa[x] + h2o[x] + 2bextdetcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'had[x] + coa[x] + h2o[x] + 2bextdetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'had[x] + coa[x] + h2o[x] + 2bextdetcoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4bextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4bextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4bextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4bextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + ote5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + ote5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hextdetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + ote5coa[x] -> h[x] + nadh[x] + acc					
'crn[m] + M00123[m] <=> coa[m] + M00122[m]' 'crn[m] + M00100[c] <=> crn[c] + M00100[m]' 'crn[m] + M00101[m] <=> coa[m] + M001726[c]' 'crn[m] + M00106[m] <=> coa[m] + M01726[m]' 'occoa[x] + o2[x] -> h2o2[x] + HC01415[x]' 'h2o[x] + HC01415[x] -> hC01405[x]' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x]' 'oa[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x]' 'inad[x] + HC01406[x] -> accoa[x] + hxcoa[x] + strdnccoa[x] + str					
crn[m] + M00100[c] <=> crn[c] + M00100[m] ' crn[m] + M00101[m] <=> coa[m] + M00100[m] ' crn[c] + M01726[m] <=> coa[m] + M01726[c] ' crn[m] + M00006[m] <=> coa[m] + M01726[m] ' occoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' h2o[x] + HC01415[x] -> HC01405[x] ' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x] ' coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'mndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'adodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2bexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' 'ahexdtetcoa[x] -> 2bexdtetcoa[x] -> happ[x] + 3hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[
'crn[m] + M00101[m] <=> coa[m] + M00100[m]' 'crn[c] + M01726[m] <=> crn[m] + M01726[c]' 'crn[m] + M00006[m] <=> coa[m] + M01726[m]' 'occoa[x] + o2[x] -> h2o2[x] + HC01415[x]' 'h2o[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x]' 'coa[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x]' 'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x]' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x]' 'tmndnccoa[c] <=> tmndnccoa[x]' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x]' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x]' '3decdicoa[x] -> 2decdicoa[x]' 'n[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x]' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x]' 'nad[x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x]' 'nad[x] + coa[x] + h2o[x] + 2bexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + b2o2[x] + 3dodtricoa[x]' 'nad[x] + coa[x] + h2o[x] + 2bexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + b2o2[x] + 4bexdtetcoa[x] -> h2o2[x] + hexdpencoa[x]' 'shexdtetcoa[x] -> 2bexdtetcoa[x] -> nadp[x] + 3hexdtetcoa[x]' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexdtetcoa[x] '					
'crr[c] + M01726[m] <=> crn[m] + M01726[c]' 'crn[m] + M00006[m] <=> coa[m] + M01726[m]' 'occoa[x] + o2[x] -> h2o2[x] + HC01415[x]' 'h2o[x] + HC01415[x] -> HC01405[x]' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x]' 'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x]' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x]' 'tmndnccoa[c] <=> tmndnccoa[x]' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x]' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x]' '3decdicoa[x] -> 2decdicoa[x]' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] -> dec47dicoa[x] -> h2o2[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] -> dec47di					
'crr[m] + M00006[m] <=> coa[m] + M01726[m] ' 'occoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' 'h2o[x] + HC01415[x] -> HC01405[x] ' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x] ' 'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'tmndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' 'ahexdtetcoa[x] -> 2hexdtetcoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'h[x] + nadph[x] + hexdpencoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + ote5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					
'occoa[x] + o2[x] -> h2o2[x] + HC01415[x] ' 'h2o[x] + HC01415[x] -> HC01405[x] ' 'nad[x] + HC01405[x] -> h[x] + nadh[x] + HC01406[x] ' 'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'tmndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' 'adodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + 02[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' '3hexdtetcoa[x] -> 2hexdtetcoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'h[x] + nadph[x] + hexdpencoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'had[x] + coa[x] + 02[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'had[x] + coa[x] + 02[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + 02[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					
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'coa[x] + HC01406[x] -> accoa[x] + hxcoa[x] ' 'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'tmndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' '3dodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dottricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + b2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' '3hexdtetcoa[x] -> 2hexdtetcoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'nad[x] + coa[x] + b2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '				''	
'nad[x] + coa[x] + h2o[x] + tmndnccoa[x] -> h[x] + nadh[x] + accoa[x] + strdnccoa[x] ' 'tmndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' '3dodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + b2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'abexdtetcoa[x] -> 2hexdtetcoa[x] ' 'nad[x] + coa[x] + h2o[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '				'' '' '' '' ''	
'tmndnccoa[c] <=> tmndnccoa[x] ' 'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' '3dodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dottricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' '3hexdtetcoa[x] -> 2hexdtetcoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'had[x] + coa[x] + h2o[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + h2o[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '				'' '' ''	
'o2[x] + dec47dicoa[x] -> h2o2[x] + dectricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2decdicoa[x] -> h[x] + nadh[x] + accoa[x] + octe5coa[x] ' '3decdicoa[x] -> 2decdicoa[x] ' 'h[x] + nadph[x] + dectricoa[x] -> nadp[x] + 3decdicoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2dodtricoa[x] -> h[x] + nadh[x] + accoa[x] + dec47dicoa[x] ' '3dodtricoa[x] -> 2dodtricoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + 5tedtricoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 3dodtricoa[x] ' 'nad[x] + coa[x] + h2o[x] + 2hexdtetcoa[x] -> h[x] + nadh[x] + accoa[x] + 5tedtricoa[x] ' 'o2[x] + 4hexdtetcoa[x] -> h2o2[x] + hexdpencoa[x] ' '3hexdtetcoa[x] -> 2hexdtetcoa[x] ' 'h[x] + nadph[x] + hexdpencoa[x] -> nadp[x] + 3hexdtetcoa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + strdnccoa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + 4hexdtetcoa[x] ' 'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					
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'hexe3coa[x] -> hx2coa[x] ' 'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					
'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '					
Rat_Microar				'nad[x] + coa[x] + o2[x] + h2o[x] + octe5coa[x] -> h[x] + nadh[x] + accoa[x] + h2o2[x] + hexe3coa[x] '	
_Microar	Rat	Μοι	Rat		
A_S	RN	ISe_	Μic		
	\ <u>\</u>	Mic	roa		
ray ooan	seq	roar	rray		
гау		ray			



