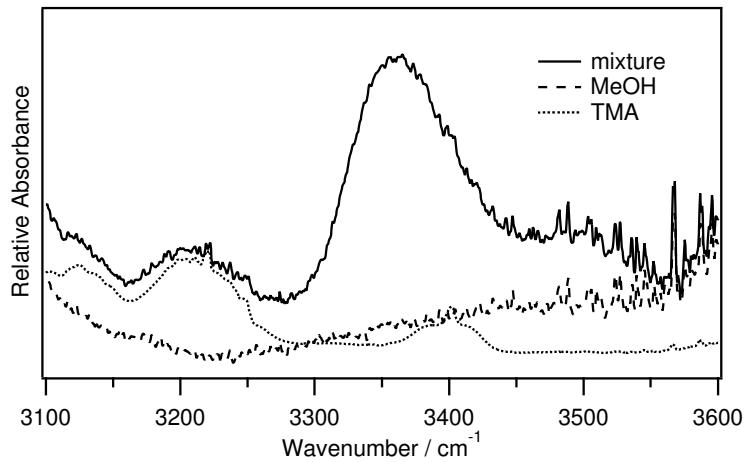
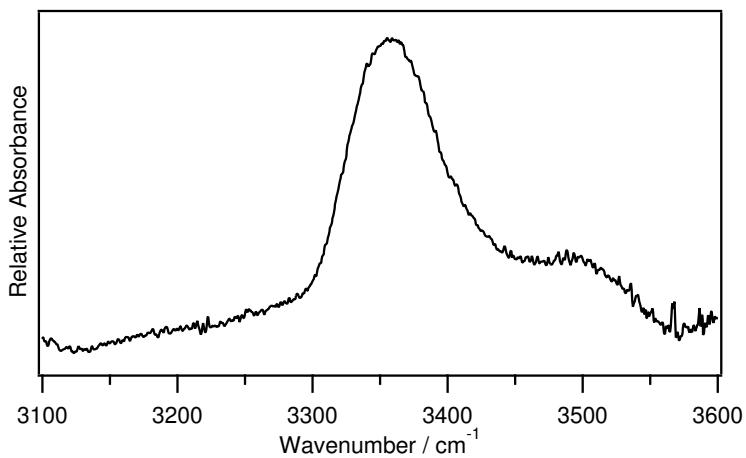


## Supporting Information



**Figure 1.** Infrared spectra of 50 Torr MeOH, 50 Torr TMA and a 100 Torr mixture of the two components recorded at 19°C.



**Figure 2.** The ν<sub>OH</sub> transition of the MeOH-TMA complex obtained by spectral subtraction of 50 Torr MeOH and 50 Torr TMA from the 100 Torr mixture of the two components.

Methanol-Trimethylamine complex QCISD/6-311++G(d,p) optimized structure  
in z-matrix form.

C

N,1,R2

H,1,R3,2,A3

H,1,R4,2,A4,3,D4

H,1,R5,2,A5,3,D5

C,2,R6,1,A6,3,D6

C,2,R7,1,A7,6,D7

H,6,R8,2,A8,1,D8

H,6,R9,2,A9,8,D9

H,6,R10,2,A10,8,D10

H,7,R11,2,A11,1,D11

H,7,R12,2,A12,11,D12

H,7,R13,2,A13,11,D13

H,1,R14,2,A14,3,D14

C,14,R15,1,A15,2,D15

H,15,R16,14,A16,1,D16

O,15,R17,14,A17,16,D17

H,15,R18,14,A18,16,D18

H,17,R19,15,A19,14,D19

R2 = 1.46235726, R3 = 1.09531327

R4 = 1.09555339, R5 = 1.10606078

R6 = 1.46234644, R7 = 1.46348448

R8 = 1.09530927, R9 = 1.10606372

R10 = 1.09555224, R11 = 1.09511669

R12 = 1.10583526, R13 = 1.09511786

R14 = 4.26783360, R15 = 1.10126502

R16 = 1.10127317, R17 = 1.41337987

R18 = 1.09440561, R19 = 0.97184912

A3 = 109.47409084, A4 = 109.56543226

A5 = 112.02177646, A6 = 110.70888963

A7 = 110.55528194, A8 = 109.47648291

A9 = 112.02241520, A10 = 109.56452557

A11 = 109.45431002, A12 = 111.93021913

A13 = 109.45772913, A14 = 54.91408959

A15 = 73.05663419, A16 = 108.42747150

A17 = 112.18850880, A18 = 108.03957158

A19 = 106.75058668, D4 = -118.93338404

D5 = 120.57233848, D6 = 177.51422267

D7 = 122.87184092, D8 = -177.52255209

D9 = -120.57308290, D10 = 118.93314721

D11 = 59.18909368, D12 = -120.66080911

D13 = 118.67836714, D14 = -89.56865470

D15 = 102.87815938, D16 = 62.63310110

D17 = -124.45600445, D18 = 116.85858827

D19 = 61.18717085