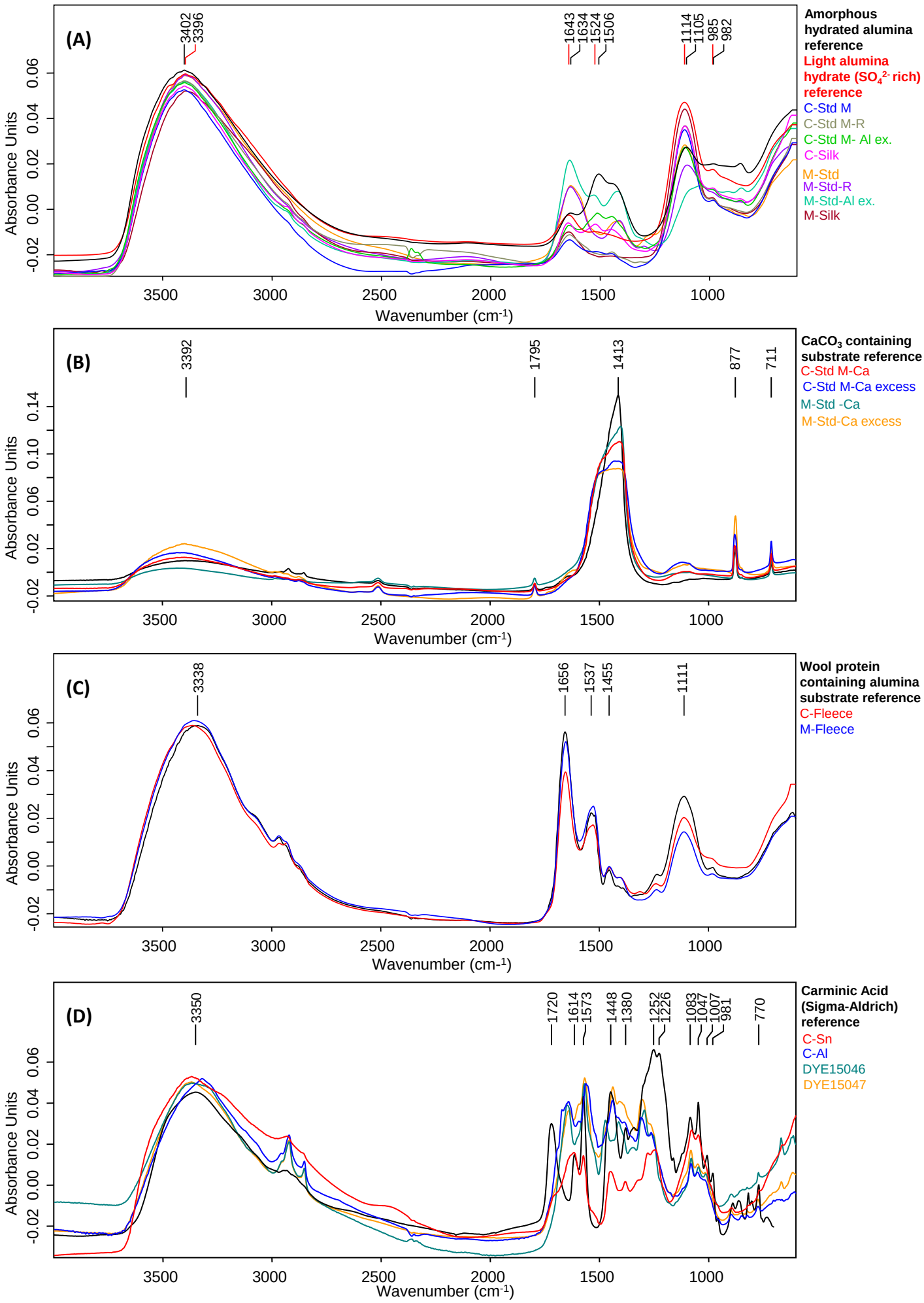
(A)
3402
3396
1643
1634
1524
1506
1114
1105
985
982
Amorphous hydrated alumina reference
Light alumina hydrate (SO_4^{2-} rich) reference
C-Std M
C-Std M-R
C-Std M- Al ex.
C-Silk
M-Std
M-Std-R
M-Std-Al ex.
M-Silk
Absorbance Units
-0.02
0.00
0.02
0.04
0.06
3500
3000
2500
2000
1500
1000
Wavenumber (cm-1)
(B)
3392
1795
1413
877
711
$CaCO_3$ containing substrate reference
C-Std M-Ca
C-Std M-Ca excess
M-Std -Ca
M-Std-Ca excess
Absorbance Units
-0.02
0.02
0.06
0.10
0.14
3500
3000
2500
2000
1500
1000
Wavenumber (cm-1)
(C)
3338
1656
1537
1455
1111
Wool protein containing alumina substrate reference
C-Fleece
M-Fleece
Absorbance Units
-0.02
0.00
0.02
0.04
0.06
3500
3000
2500
2000
1500
1000
Wavenumber (cm-1)
(D)
3350
1720
1614
1573
1448
1380
1252
1226
1083
1047
1007
981
770
Carminic Acid (Sigma-Aldrich) reference
C-Sn
C-Al
DYE15046
DYE15047
Absorbance Units
-0.02
0.00
0.02
0.04
0.06
3500
3000
2500
2000
1500
1000
Wavenumber (cm-1)