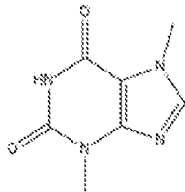
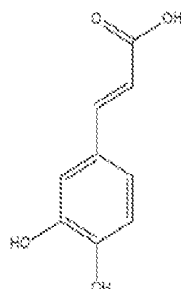


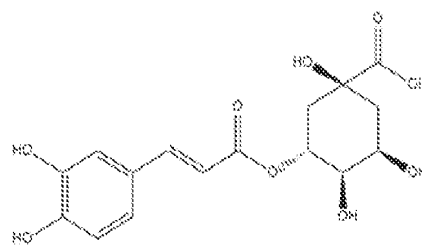
Caffeine



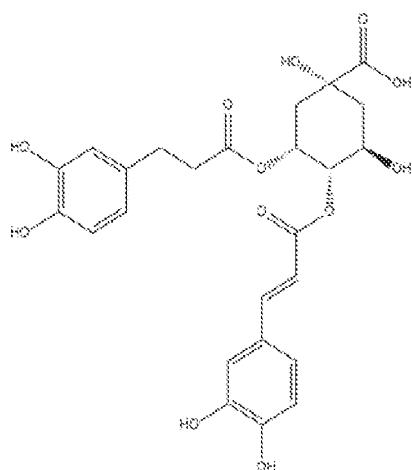
Theobromine



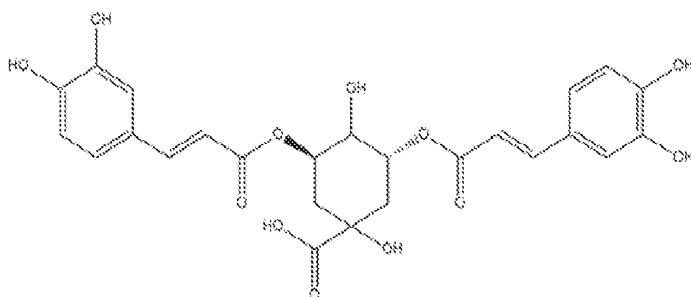
Caffeic Acid



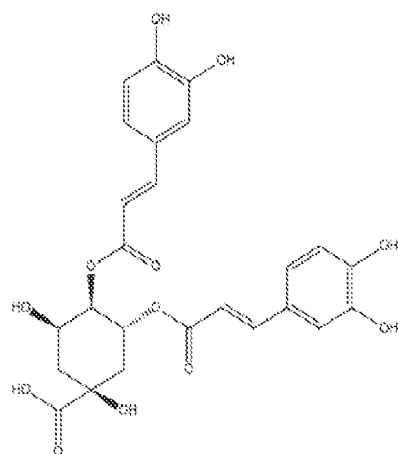
Chlorogenic Acid



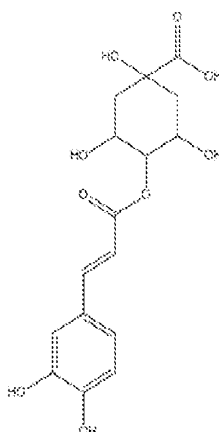
4,5-dicaffeoylquinic acid



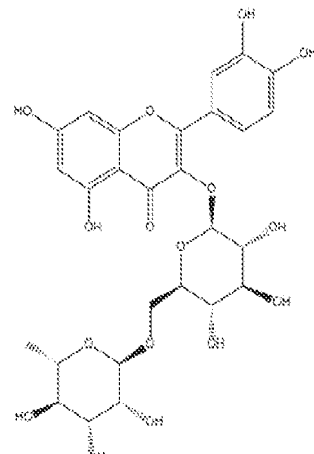
3,5-dicaffeoylquinic acid



3,4-dicaffeoylquinic acid

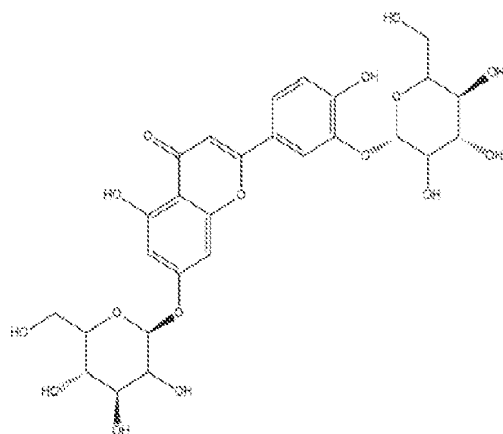


4-caffeoylquinic acid

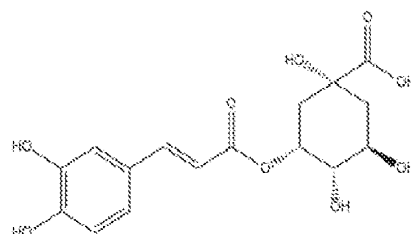


Rutin

FIGURE 1A

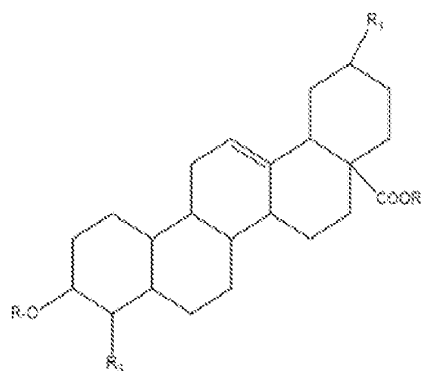
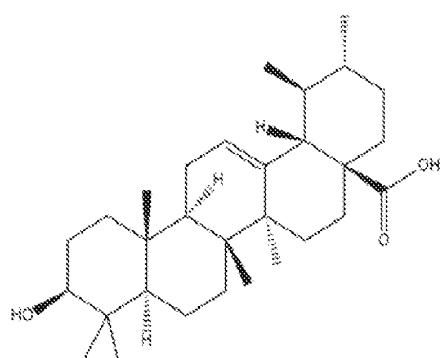


Luteolin-diglucoside



5-O-caffeoylquinic acid

Ursonic Acid Glycosides



Saponin	Moiety	R	R ₁	R ₂	R ₃
Matesaponin 1	Ursolic acid	glc(1→3)ara	H	glc	H
Matesaponin 2	Ursolic acid	glc(1→3)rha(1→2)ara	H	glc	H
Matesaponin 3	Ursolic acid	glc(1→3)ara	H	glc(1→6)glc	H
Matesaponin 4	Ursolic acid	glc(1→3)rha(1→2)ara	H	glc(1→6)glc	H
Matesaponin 5	Ursolic acid	glc(1→3)rha(1→2)ara	H	glc(1→4)glc(1→6)glc	H

FIGURE 1B

EFFECT OF EXTRACTION SOLVENTS

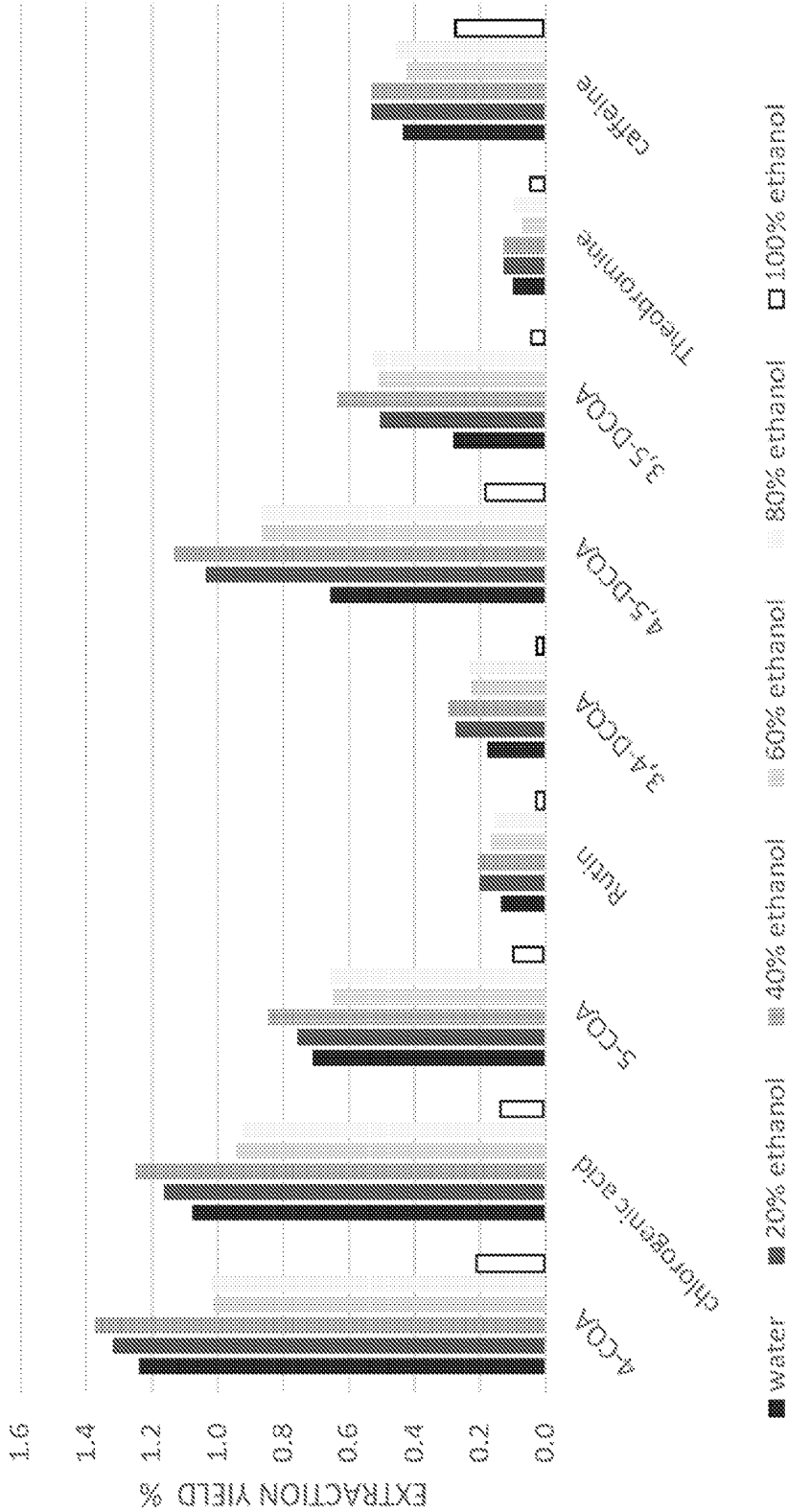


FIGURE 2

DPPH inhibition of Yerba Mate Extracts made by different

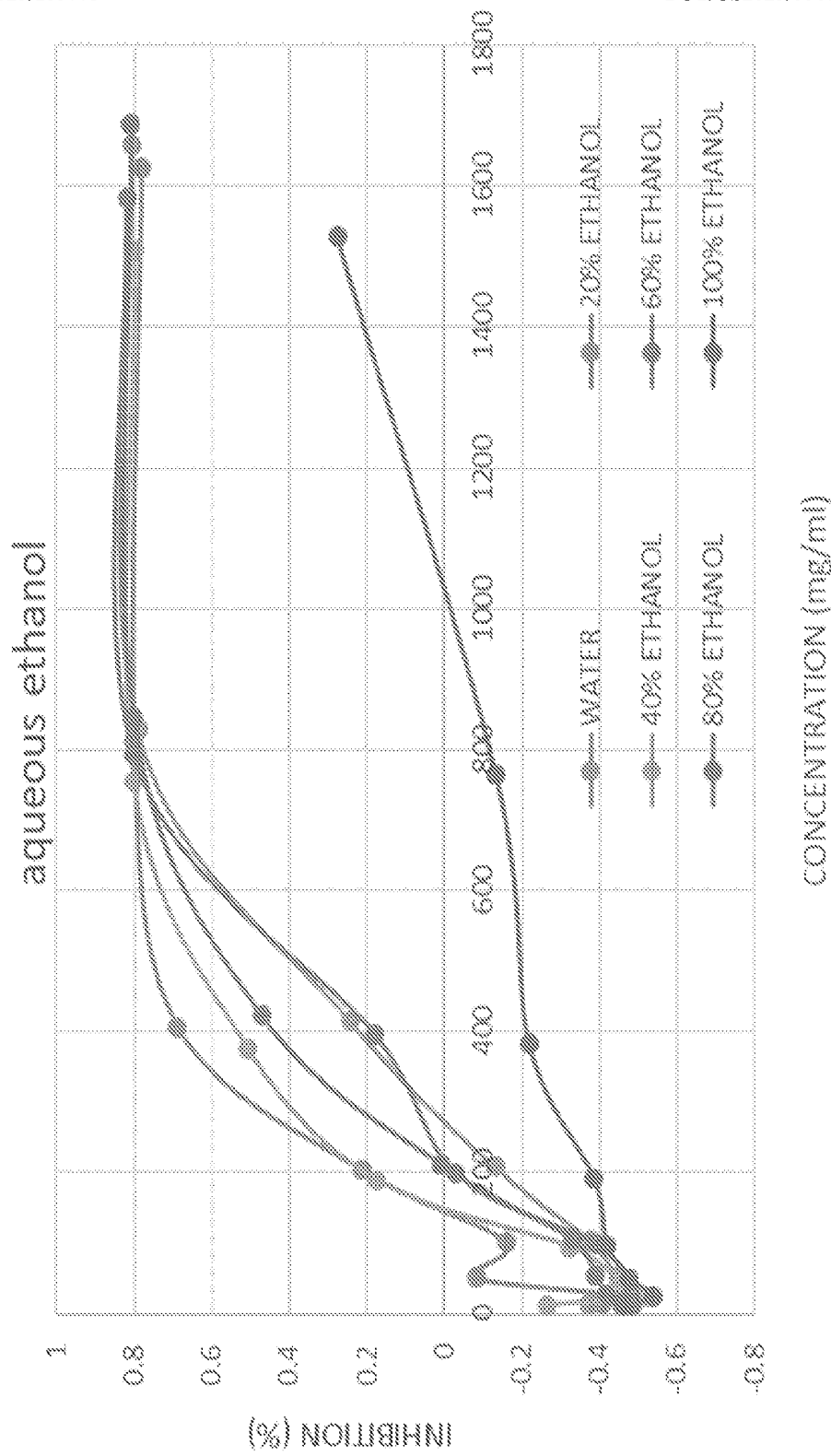


FIGURE 3

EXTRACTION YIELD OF BIOACTIVES IN YERBA
MATE BY DIFFERENT NADES

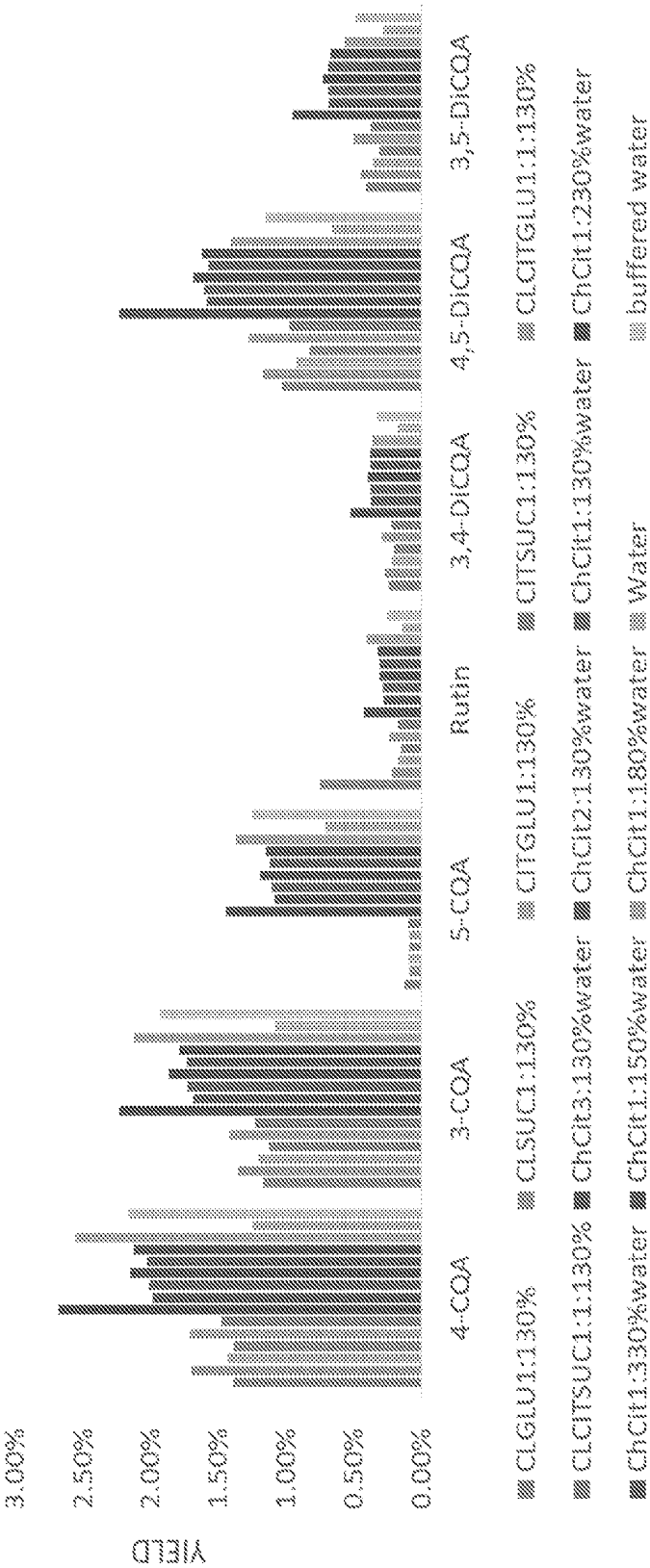


FIGURE 4

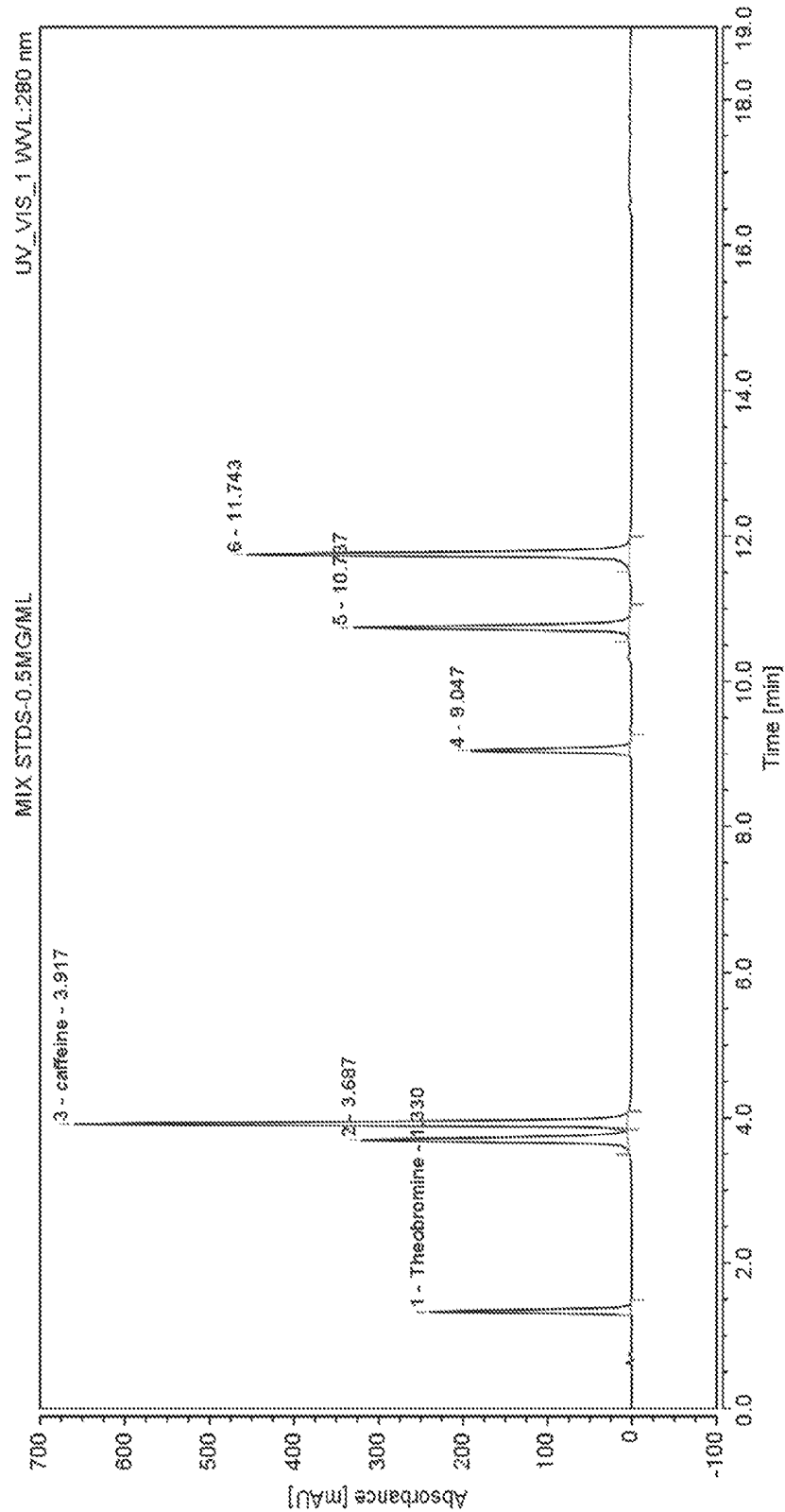


FIGURE 5A

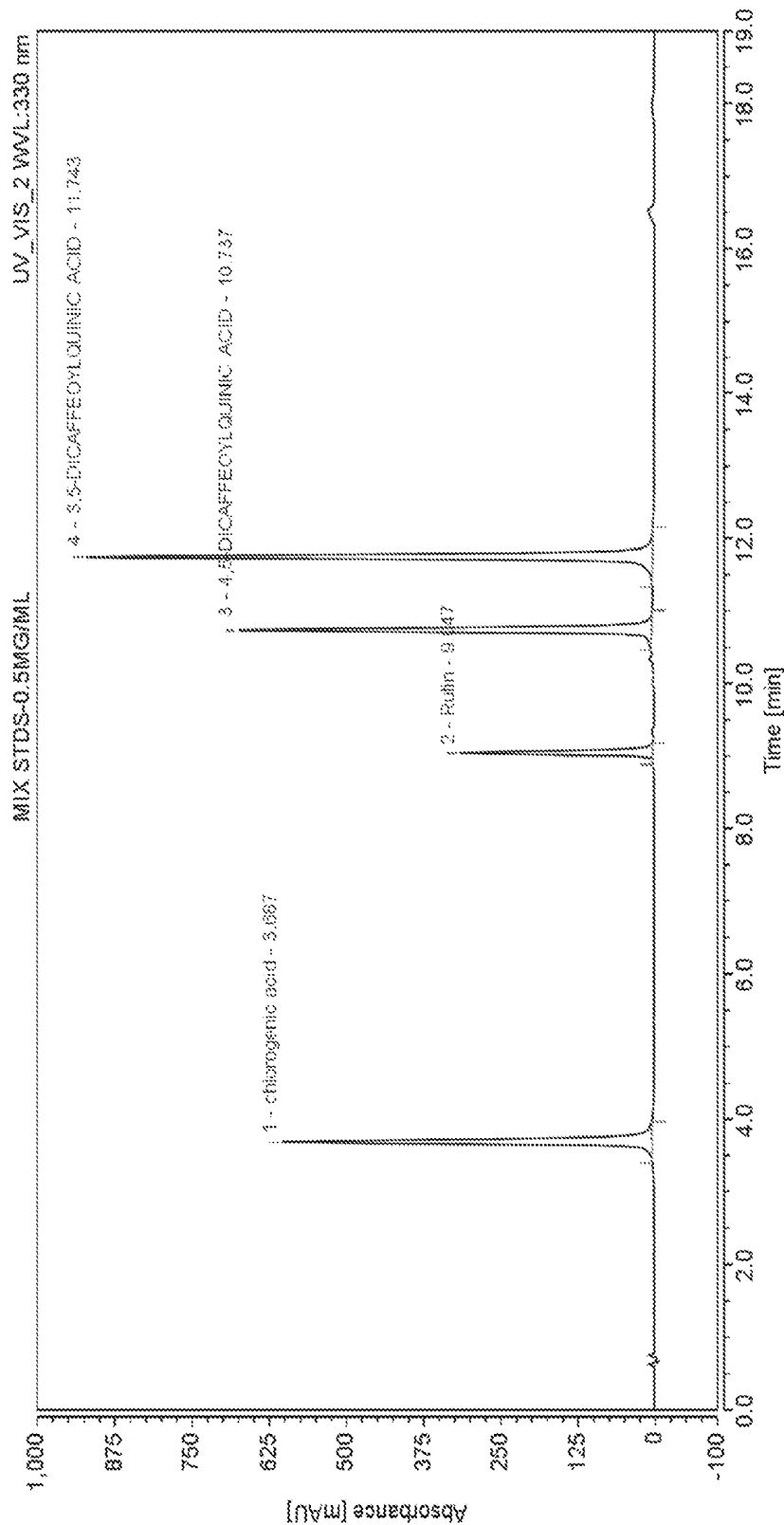


FIGURE 5B

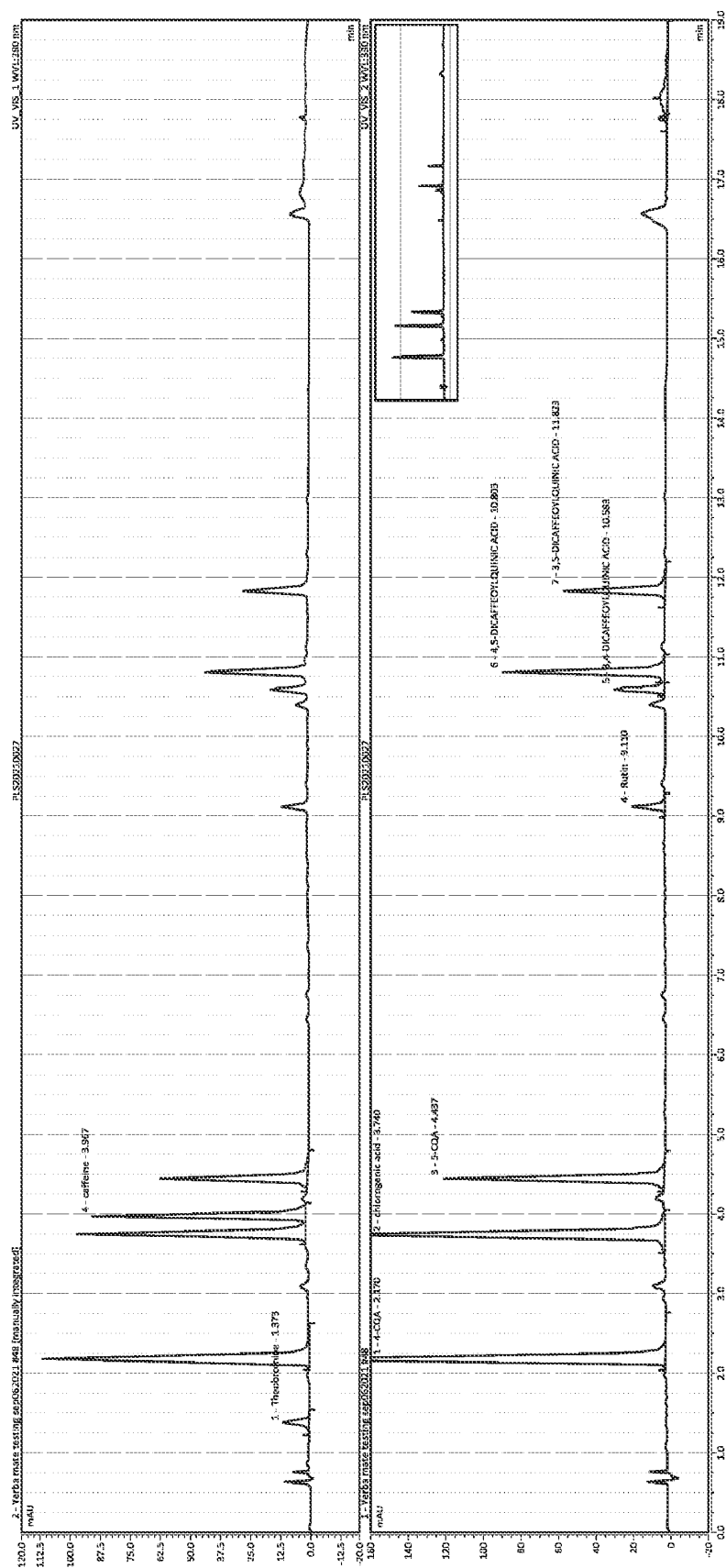


FIGURE 5C

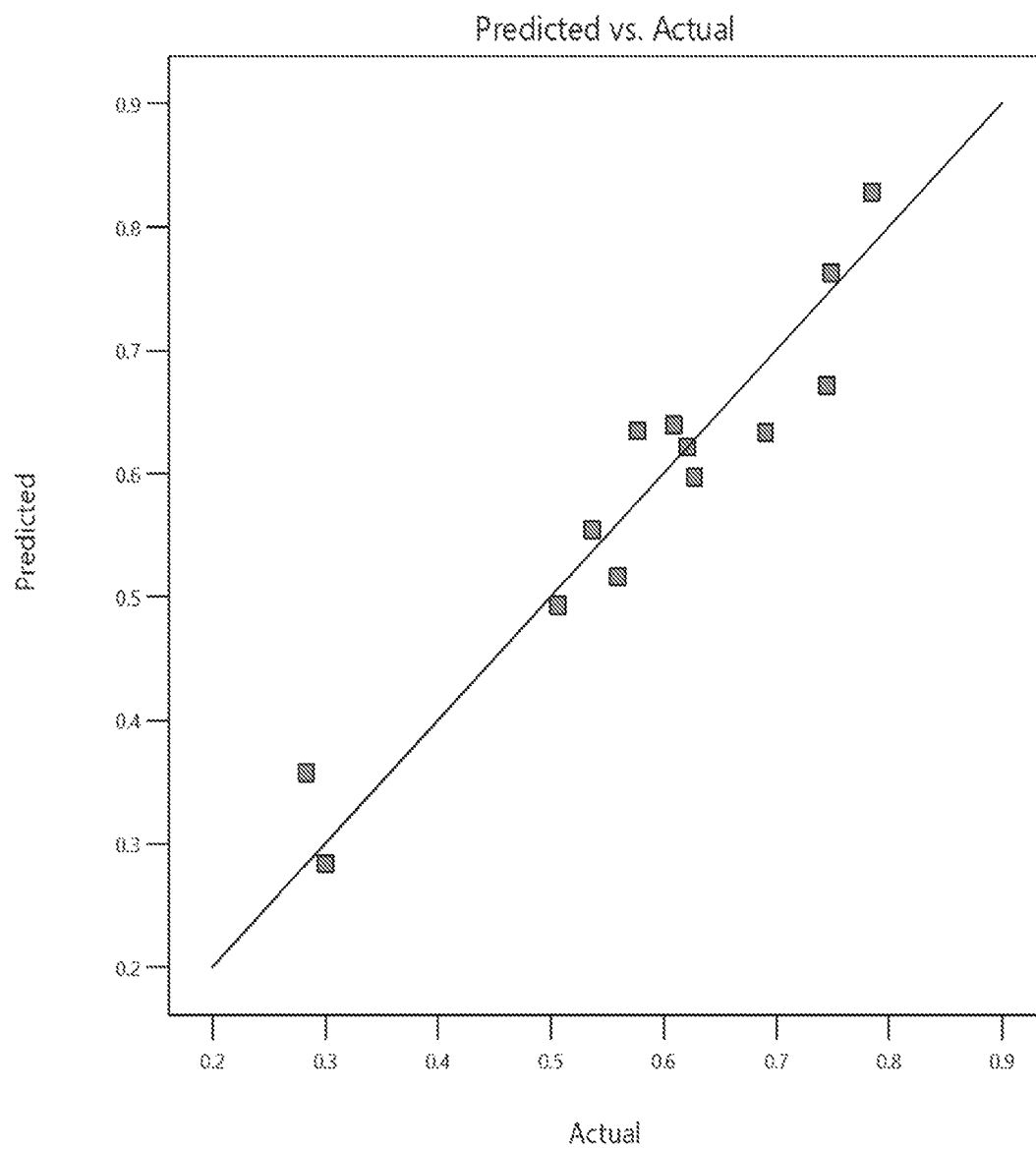


FIGURE 6A

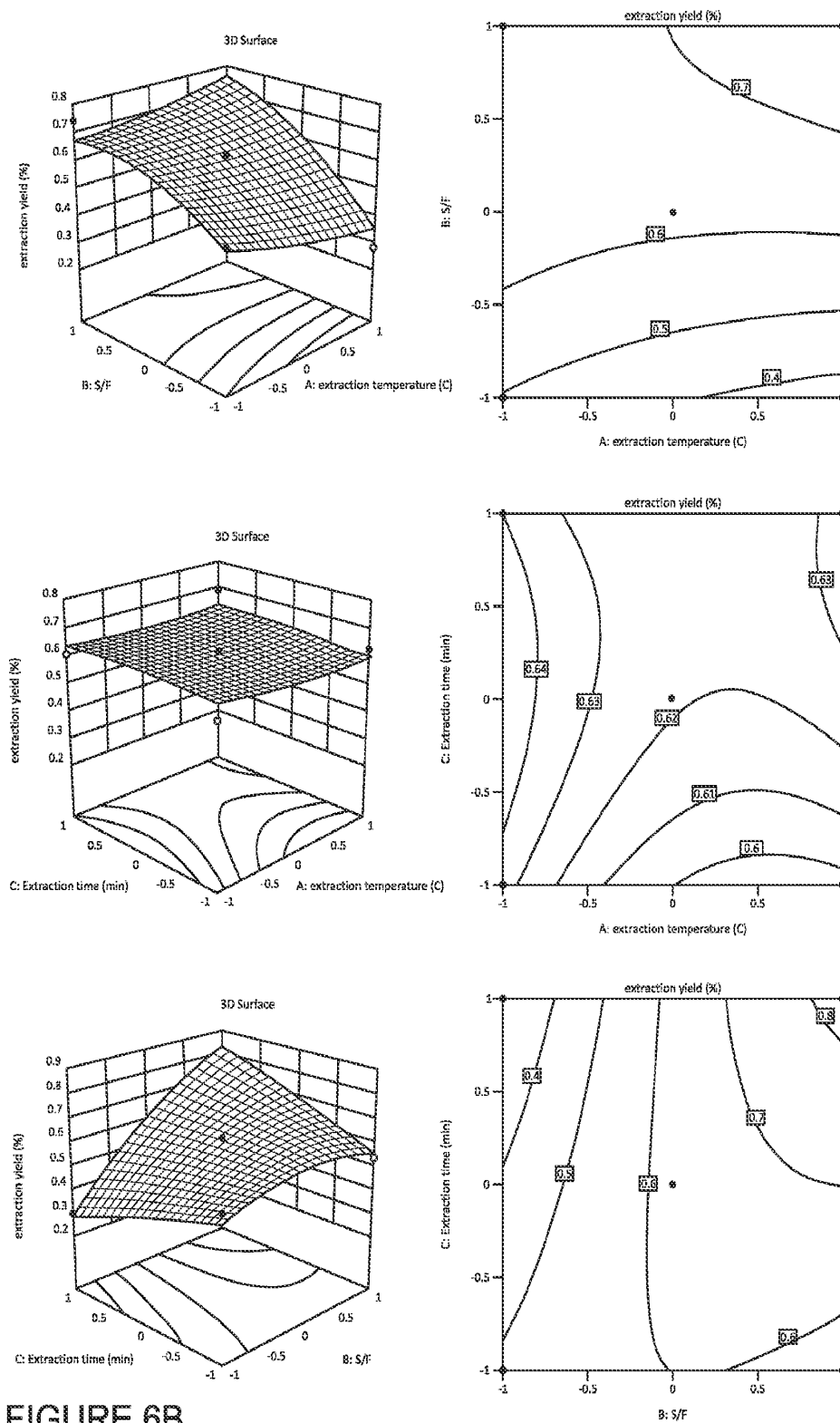


FIGURE 6B

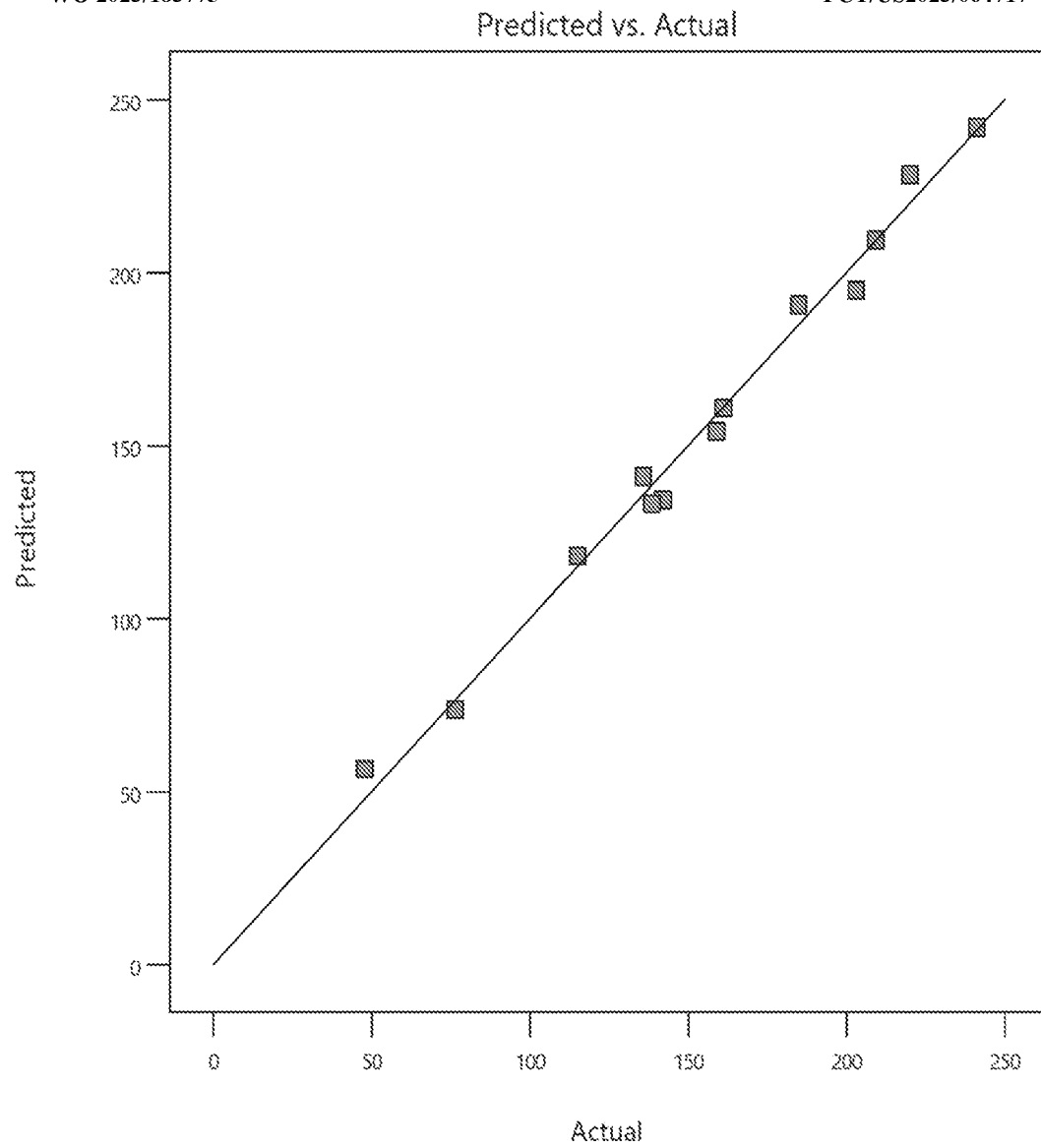


FIGURE 6C

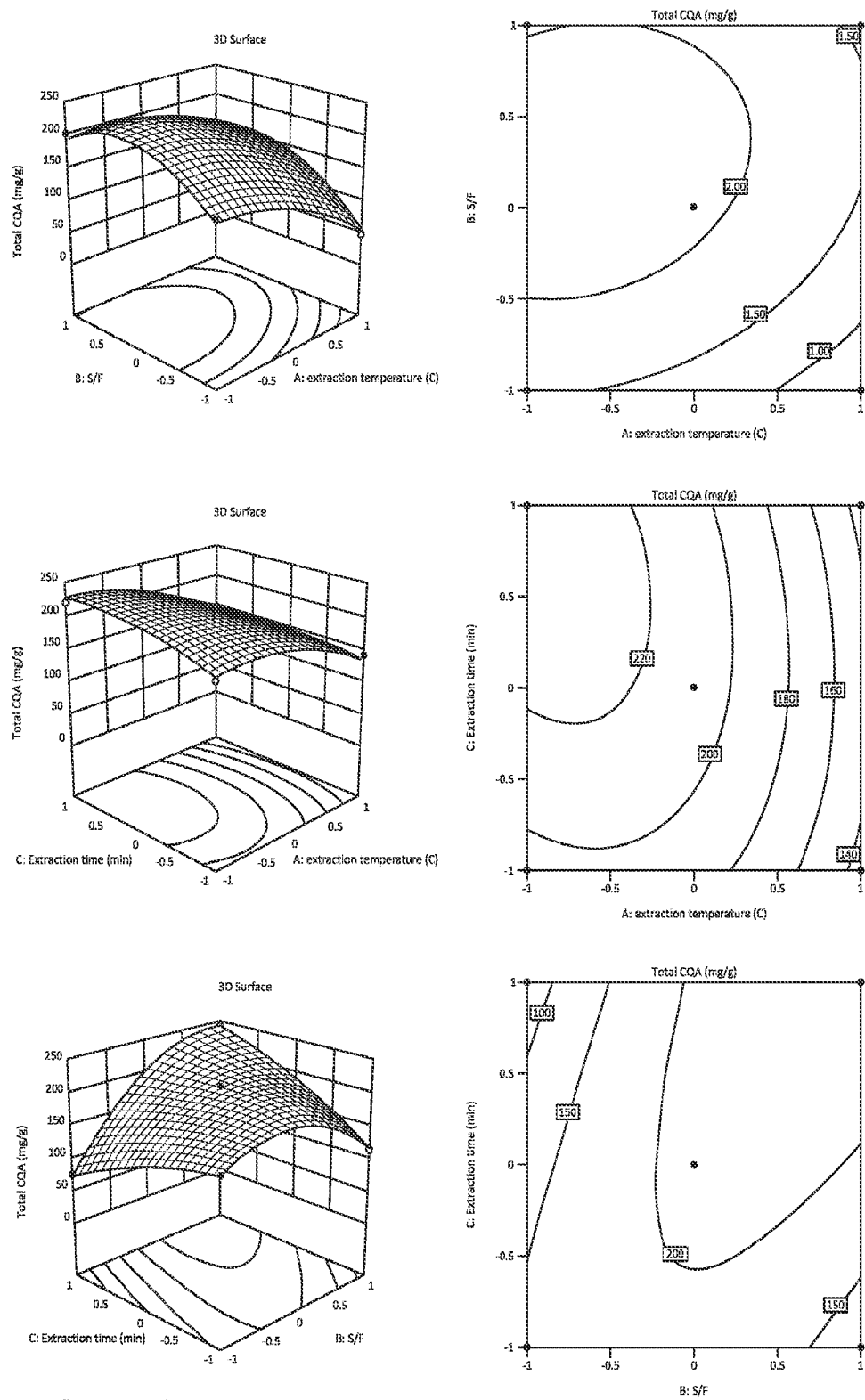


FIGURE 6D

THEOBROMINE EXTRACTION YIELD BY NADEX

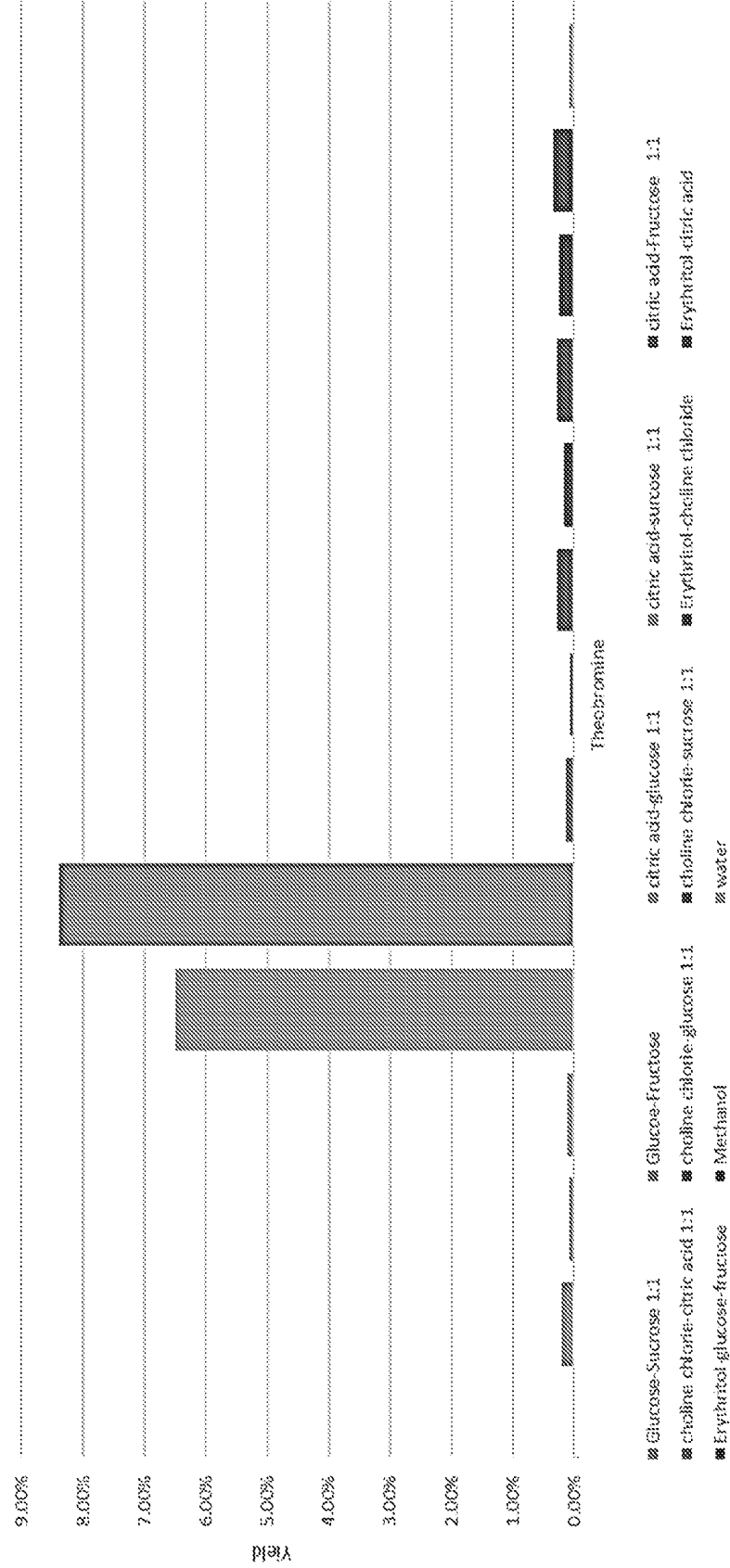


FIGURE 7