

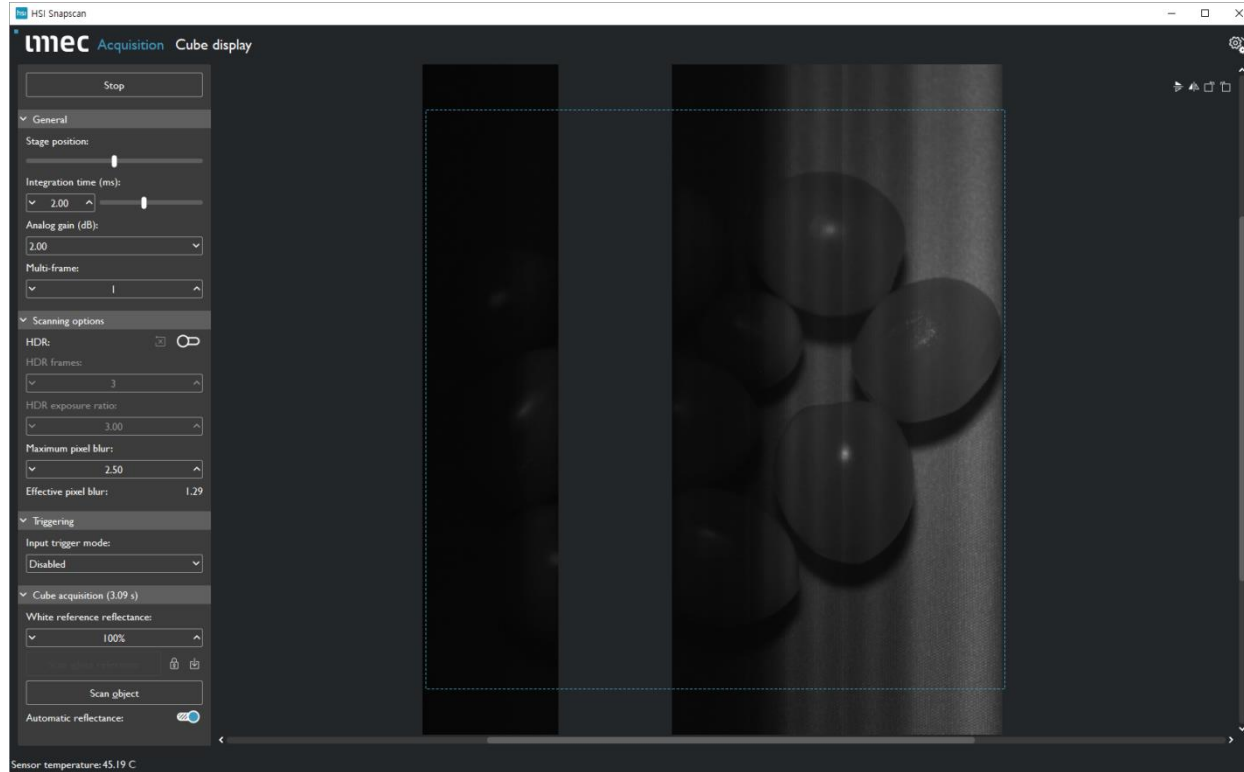
초분광 측정 데이터 – 방울 토마토

SNAPSCAN VNIR (470 ~ 900nm)

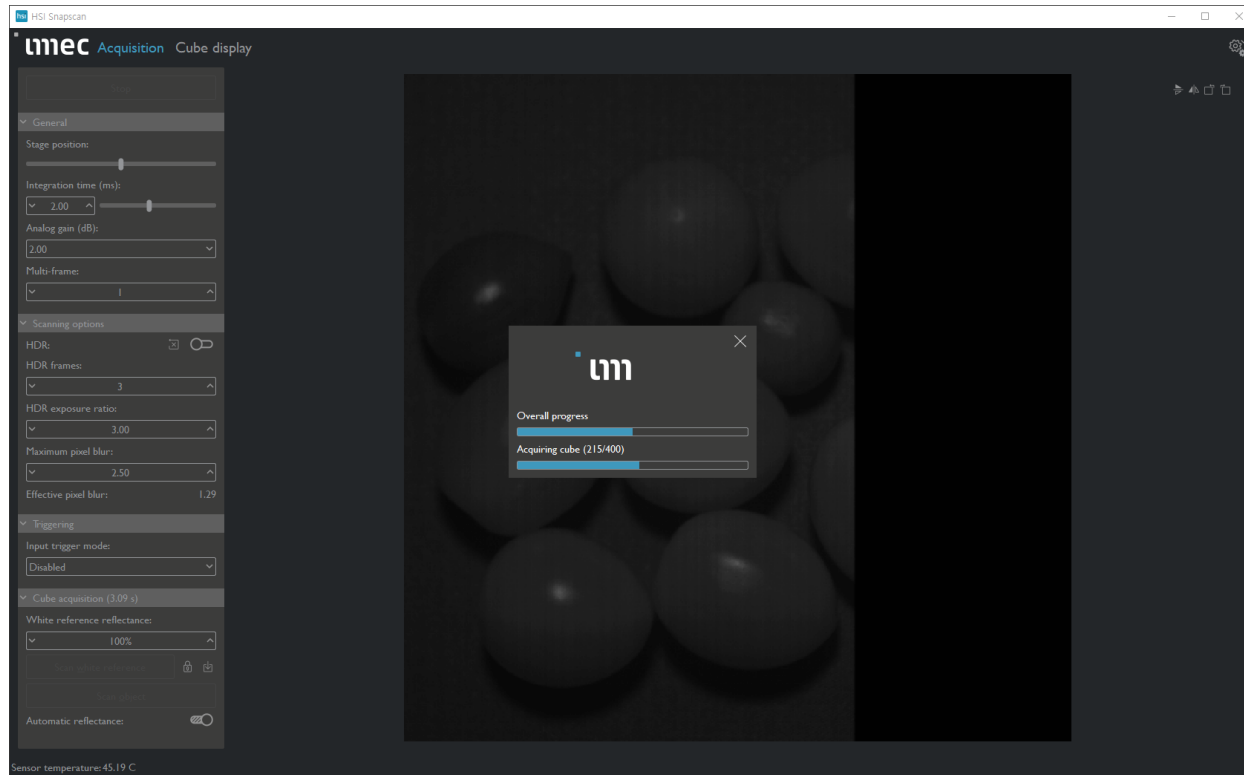
촬영 조건

- 초분광 카메라
 - 모델 : SNAPSCAN VNIR
 - 파장 범위 : 470 ~ 900nm
 - 분광 밴드 : 150개
 - 최대 공간 해상도 : 3650 x 2048 픽셀
 - 촬영 해상도 : 500 x 500 (2x binning)
 - 렌즈 : F2.0/24mm
 - 촬영 거리 : 500mm
- 조명
 - FOMEX H1000
 - 할로겐 650W

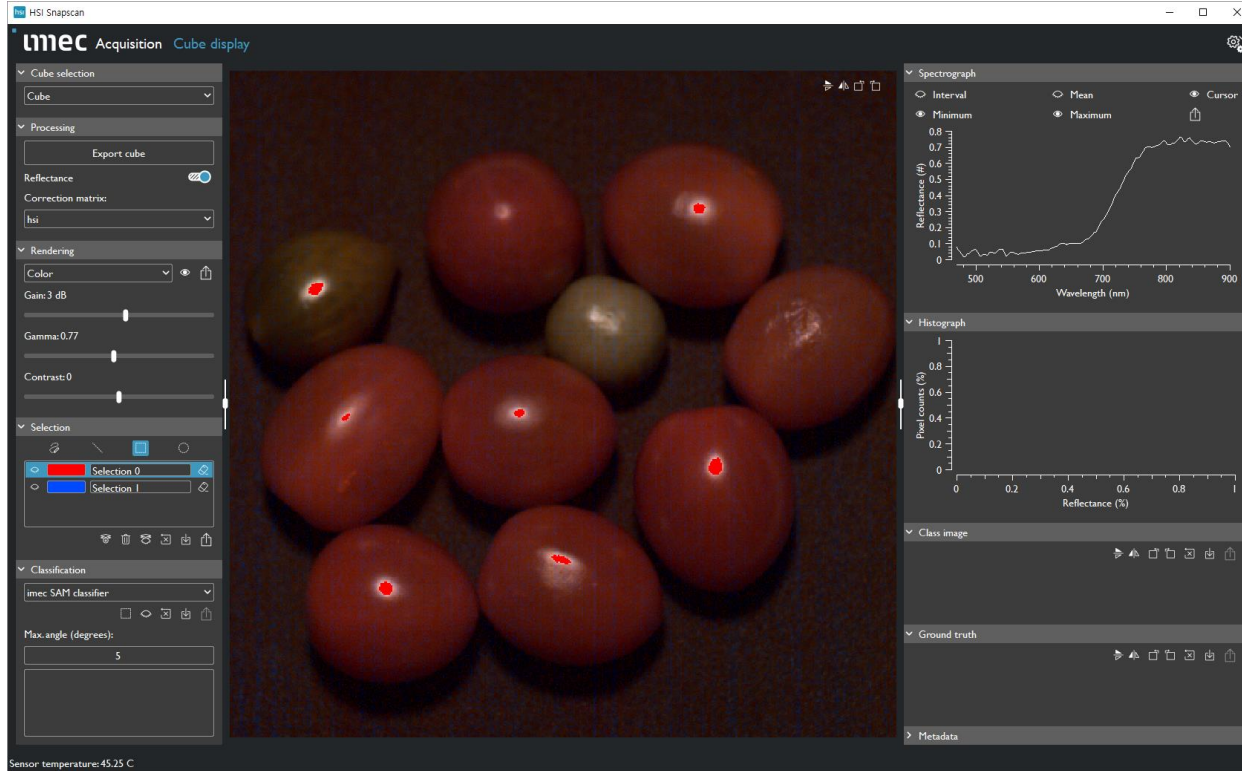
HSI Snapscan – Live view



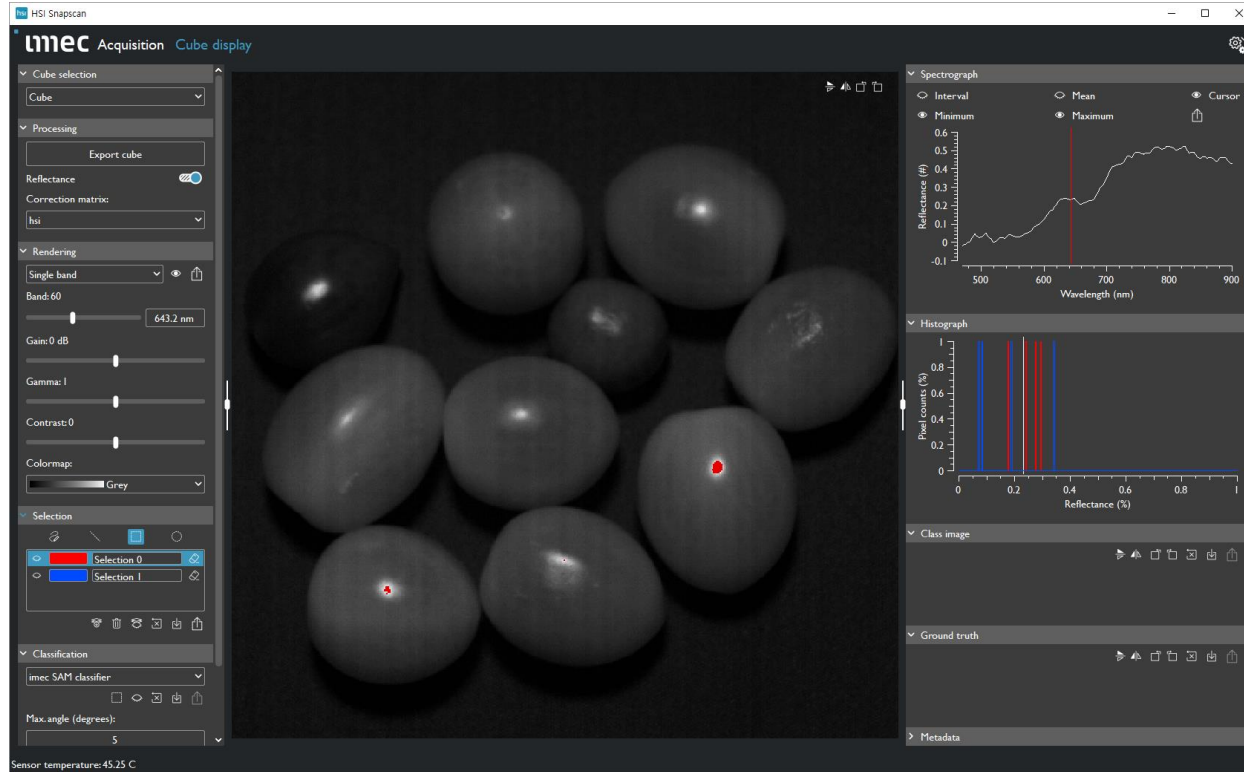
HSI Snapscan – Image acquisition



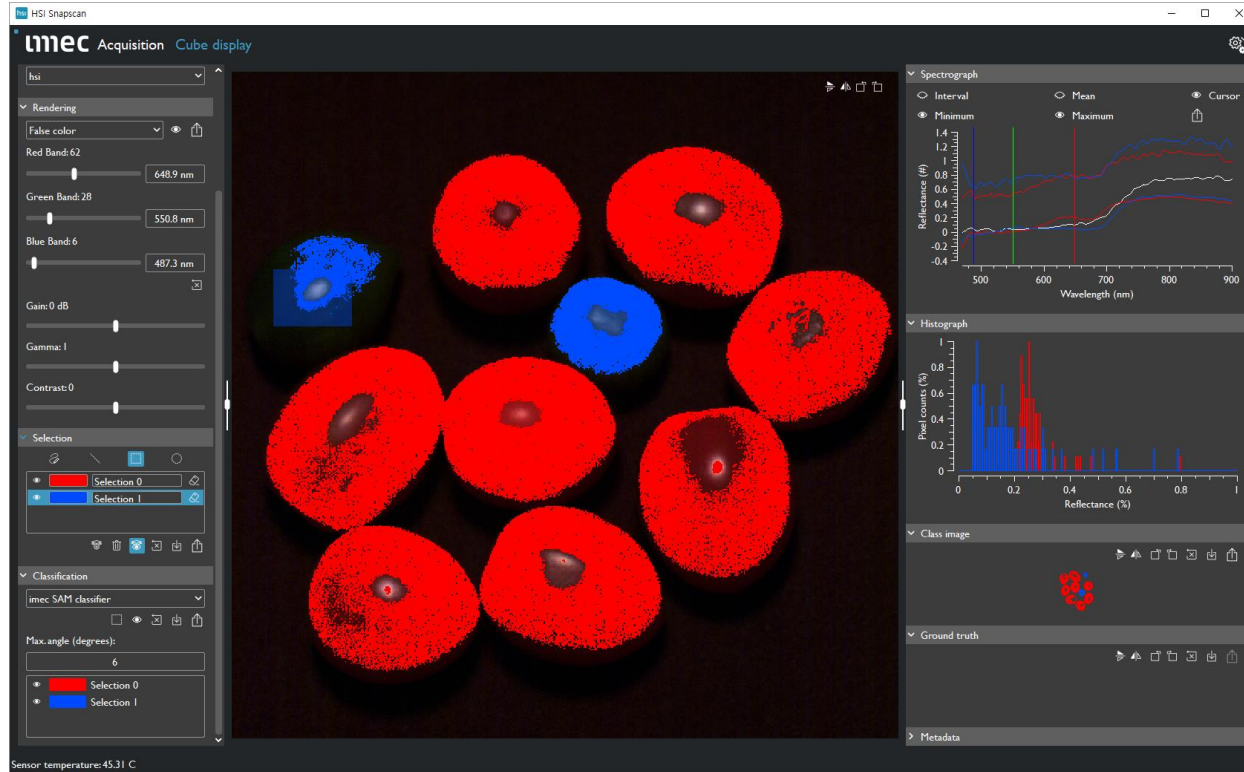
HSI Snapscan – Color image



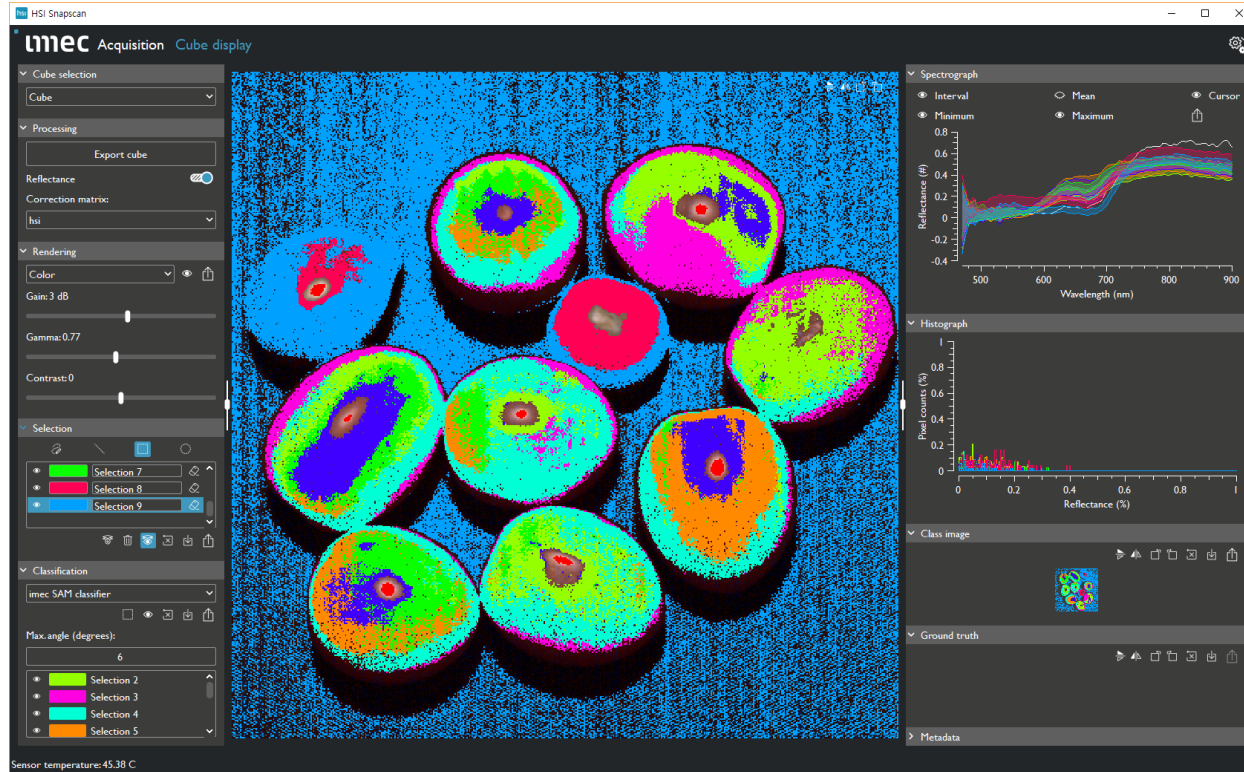
HSI Snapscan – Single band image (ex. 643nm)



HSI Snapscan – SAM classification-1

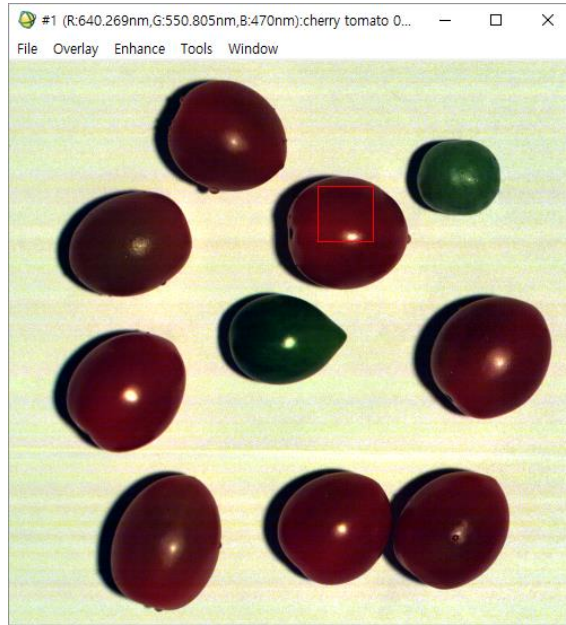


HSI Snapscan – SAM classification-2

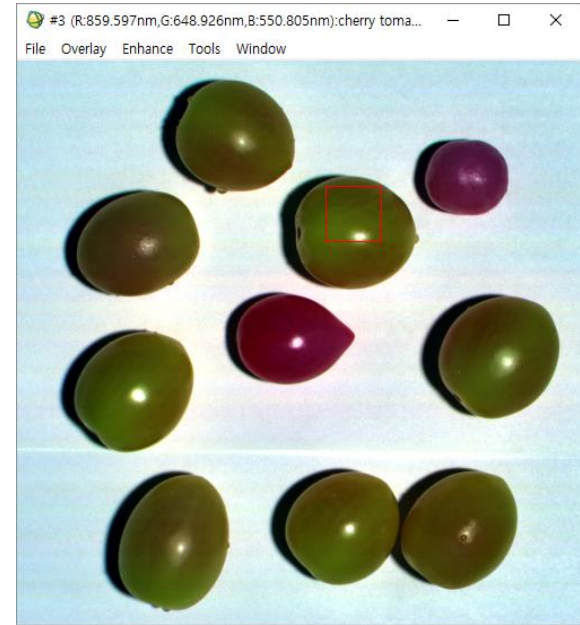


ENVI

True color image

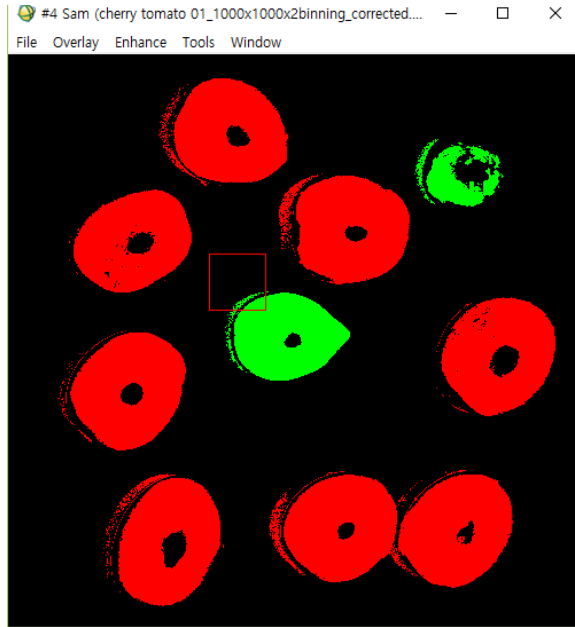


CIR image

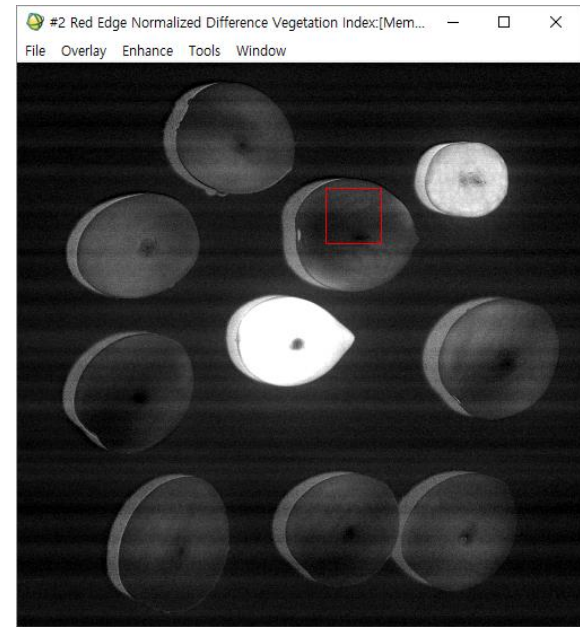


ENVI

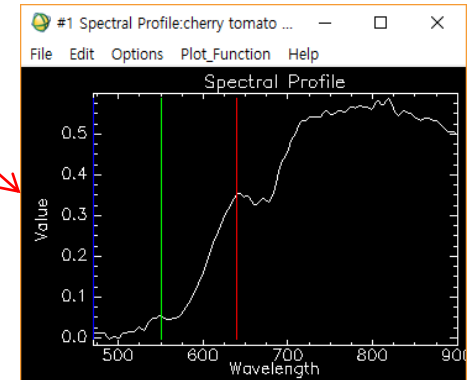
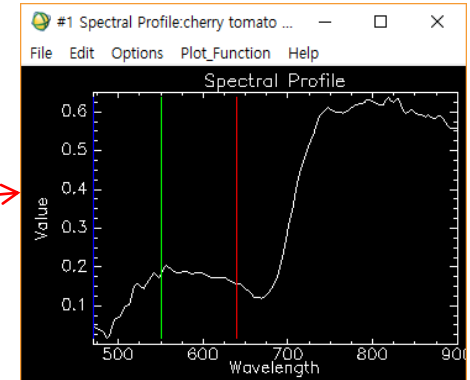
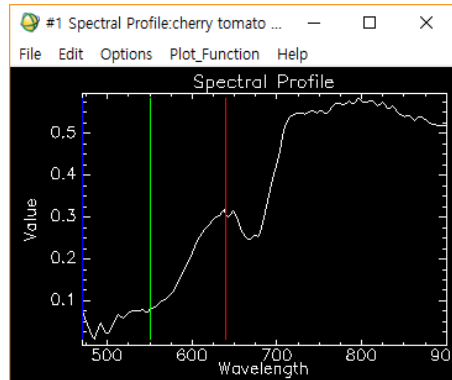
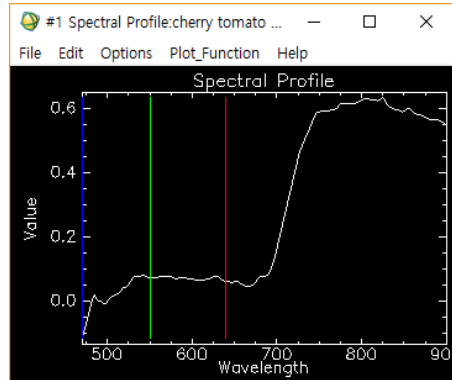
SAM classification image



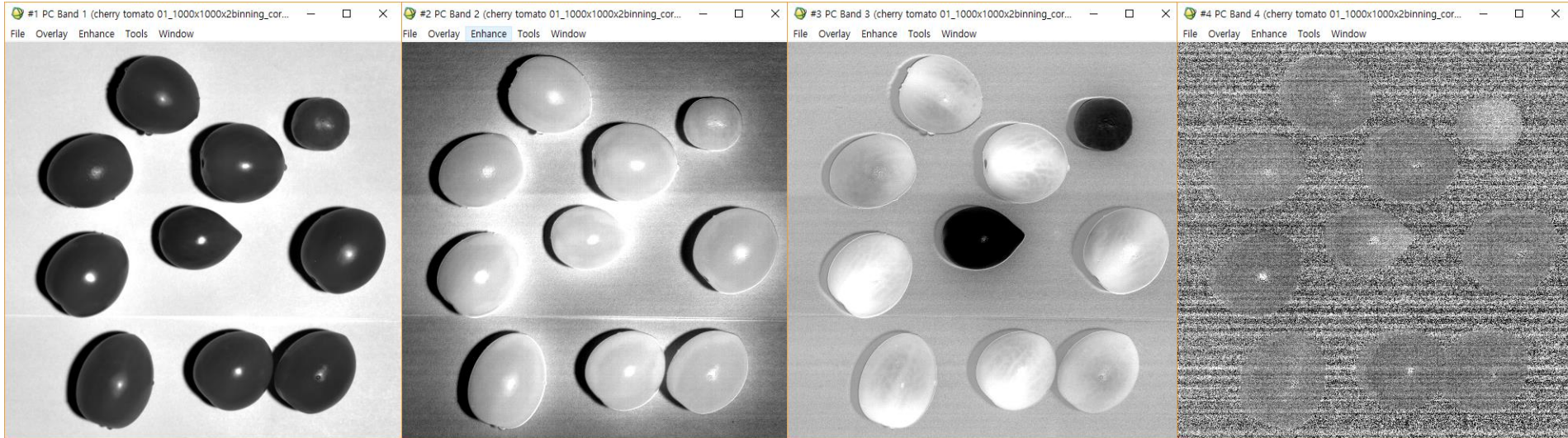
Red Edge NDVI



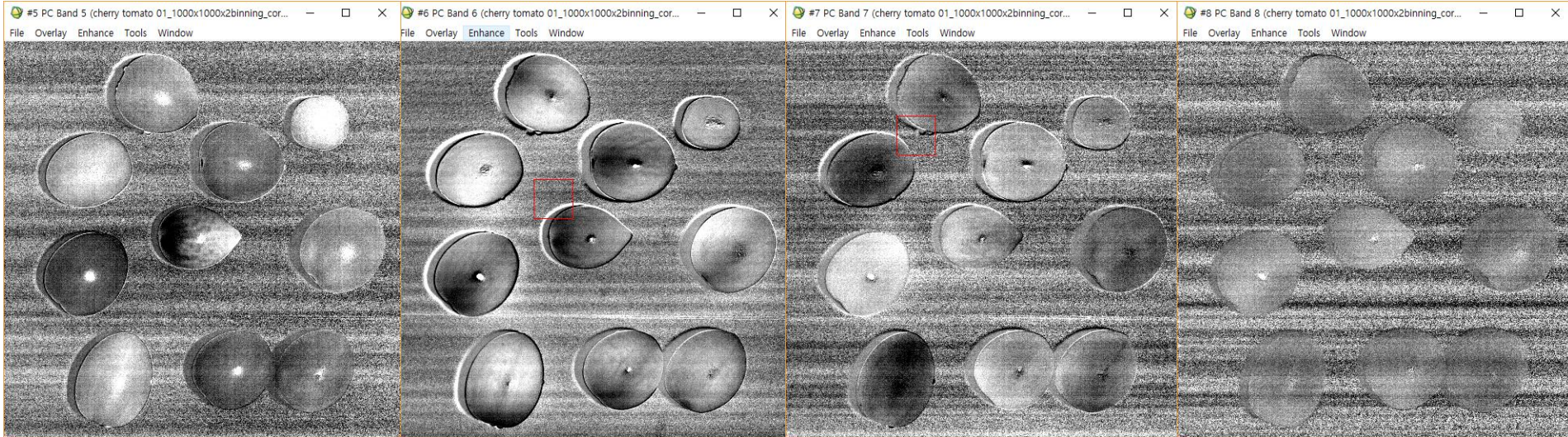
ENVI



ENVI – PCA (Band #1 ~ #4)



ENVI – PCA (Band #5 ~ #8)



결론

- Live view 화면을 통해 측정 영역 전체에 대한 미리 보기 및 초점 조절 작업 등이 용이함
- 150개 밴드의 full spectrum 취득
- 풀프레임 설정시 3650x2048의 높은 공간해상도 확보
- 별도의 이송장치 없이 간단한 구성으로 측정 가능
- 번들 SW에 포함된 기본 SAM 분류 결과는 ENVI와 차이 없으나 추가적인 분석 기능을 위해서는 ENVI 등 범용 분석 SW 사용 권장
- 제품의 등급 구분을 위한 별도의 알고리즘 개발 필요