


FTIR Analysis Report

Client: ZHEJIANG XINHAIYE BAMBOO TECHNOLOGY CO., LTD.	Sample Received on: 07/26/2019
Sample Name: DassoCTECH	Sample State: Powder (Obtained from test sample)
Manufacturer: Jiangxi Zhushang Bamboo Industry Co.,Ltd Fujian Dasso Bamboo Technology Co.,Ltd	Brand: 
Test Technique: Infrared Spectrum Analysis	
Test Instrument: Bruker Alpha Fourier Transform Infrared Spectrometer	
<p>Chemical compounds for comparison:</p> <p>Compound 1: Boric acid, CAS-No: 10043-35-3, EC-No: 233-139-2, Received from Applichem GmbH;</p> <p>Compound 2: Diboron trioxide, CAS-No: 1303-86-2, EC-No: 215-125-8, Received from Alfa Aesar;</p> <p>Compound 3: Tetraboron disodium heptaoxide, hydrate, CAS-No: 12267-73-1, EC-No: 235-541-3, Received from Merck Group;</p> <p>Compound 4: Disodium tetraborate anhydrous, CAS-No: 1330-43-4, EC-No: 215-540-4, Received from Merck Group;</p> <p>Compound 5: Sodium perborate, CAS-No: 10332-33-9, EC-No: 231-556-4, Received from Sigma-Aldrich;</p> <p>Compound 6: Lead bis(tetrafluoroborate), CAS-No: 13814-96-5, EC-No: 237-486-0, Received from Sigma-Aldrich;</p> <p>Compound 7: Disodium octaborate tetrahydrate, CAS-No: 12008-41-2, EC-No: 234-541-0, As-prepared according to the Patent: CN104477930A;</p>	

Results

FTIR analysis was used to confirm whether the tested sample contains boron-based chemical compounds or not. Figure 1 shows the FTIR spectra of tested samples (DassoCTECH-1 from the inner part and DassoCTECH-2 from the surface part). Since the FTIR spectra of DassoCTECH-1 and DassoCTECH-2 are the same, the spectrum of DassoCTECH-1 was used to compare with other chemical compounds. Figure 2 displays the comparison of FTIR spectra of DassoCTECH-1 and boric acid (CAS# 10043-35-3). Figure 3 displays the comparison of FTIR spectra of DassoCTECH-1 and diboron trioxide (CAS#1303-86-2). Figure 4 displays the comparison of FTIR spectra of DassoCTECH-1 and tetraboron disodium heptaoxide, hydrate (CAS#12267-73-1). Figure 5 displays the comparison of FTIR spectra of DassoCTECH-1 and disodium tetraborate anhydrous (CAS#1330-43-4). Figure 6 displays the comparison of FTIR spectra of DassoCTECH-1 and sodium perborate (CAS#10332-33-9). Figure 7 displays the comparison of FTIR spectra of DassoCTECH-1 and Lead bis(tetrafluoroborate) (CAS#13814-96- 5). Figure 8 displays the comparison of FTIR spectra of DassoCTECH-1 and disodium octaborate (CAS#12008-41-2).

On the basis of these comparisons, a conclusion is confirmed as follows:

FTIR spectrum of tested sample DassoCTECH doesn't display the characteristic peaks of boric acid, diboron trioxide, sodium tetraborate heptahydrate, disodium tetraborate anhydrous, sodium perborate, Lead bis(tetrafluoroborate), and disodium octaborate.

Inspector: Hua Zhang



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Probenahmeprotokoll

Profilnr.	Georg-August-Universität Göttingen Fakultät für Forstwissenschaften & Waldbiologie Rugelweg 2 Raum 7114 D-37075 Göttingen	Probennehmer (Name, Firma, Telefon)	Fabrizio Kodjras F. W. Barth & Co GmbH +49 5141955511
Name des Herstellers / Händlers am Probenahmeort	F. W. Barth & Co. GmbH Fuggerei 25 41352 Korschenbroich Deutschland	Auftraggeber/ Rechnungsewfänger	Zhejiang Xinsheng Bamboo Technology Co., Ltd
Produktname	DassoCTECH	Produktart	Bambus Terrassendielen
Artikel Nr.	Material: BACT20137185CA Hersteller: ED20-SG2-STG-PSR	Chargennummer	Order NO: Bth-10 LOT NO: 3300601863
Probe wird gezogen	Aus Lagerbeständen	Datum & Uhrzeit der Probenahme	25.07.2019 10:41 Uhr
Wo wurde das Produkt vor der Probenahme gelagert?	Lagerort: F. W. Barth & Co. GmbH Fuggerei 25 41352 Korschenbroich	Wie wurde das Produkt vor Probenahme gelagert?	Auf Palette verpackt (1000 Stemmel)

Hiermit bestätige der Unterzeichner die Richtigkeit der oben gemachten Angaben. Die Probe wurde eigenhändig ausgewählt, gezogen (= 2 Stücke je 40 cm zersägt) und verpackt.

BARTH & CO
Unternehmer seit 1873
[Signature]

Datum:
25.07.2019

As-received Sample-DassoCTECH

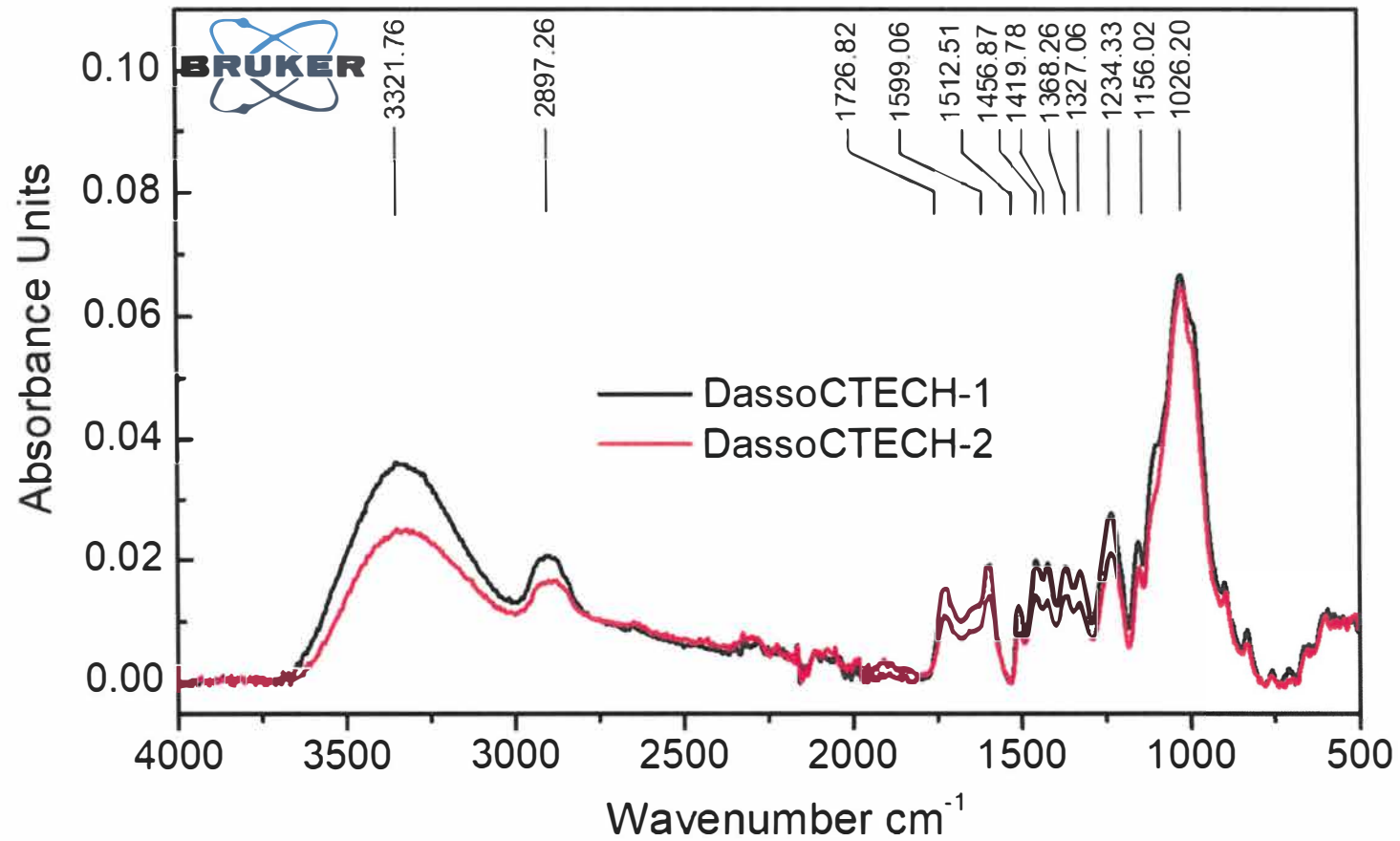
DassoCTECH-1



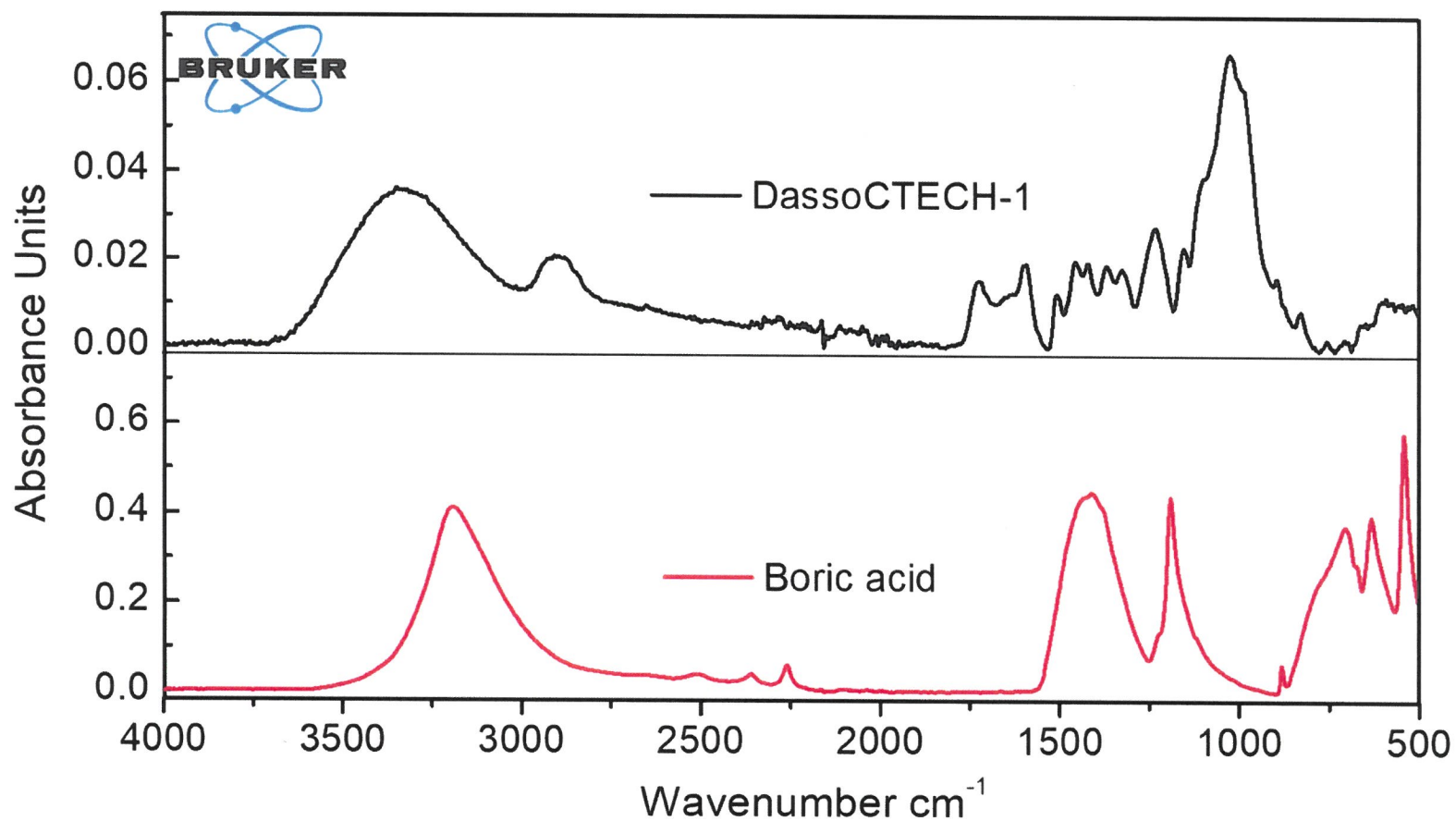
DassoCTECH-2



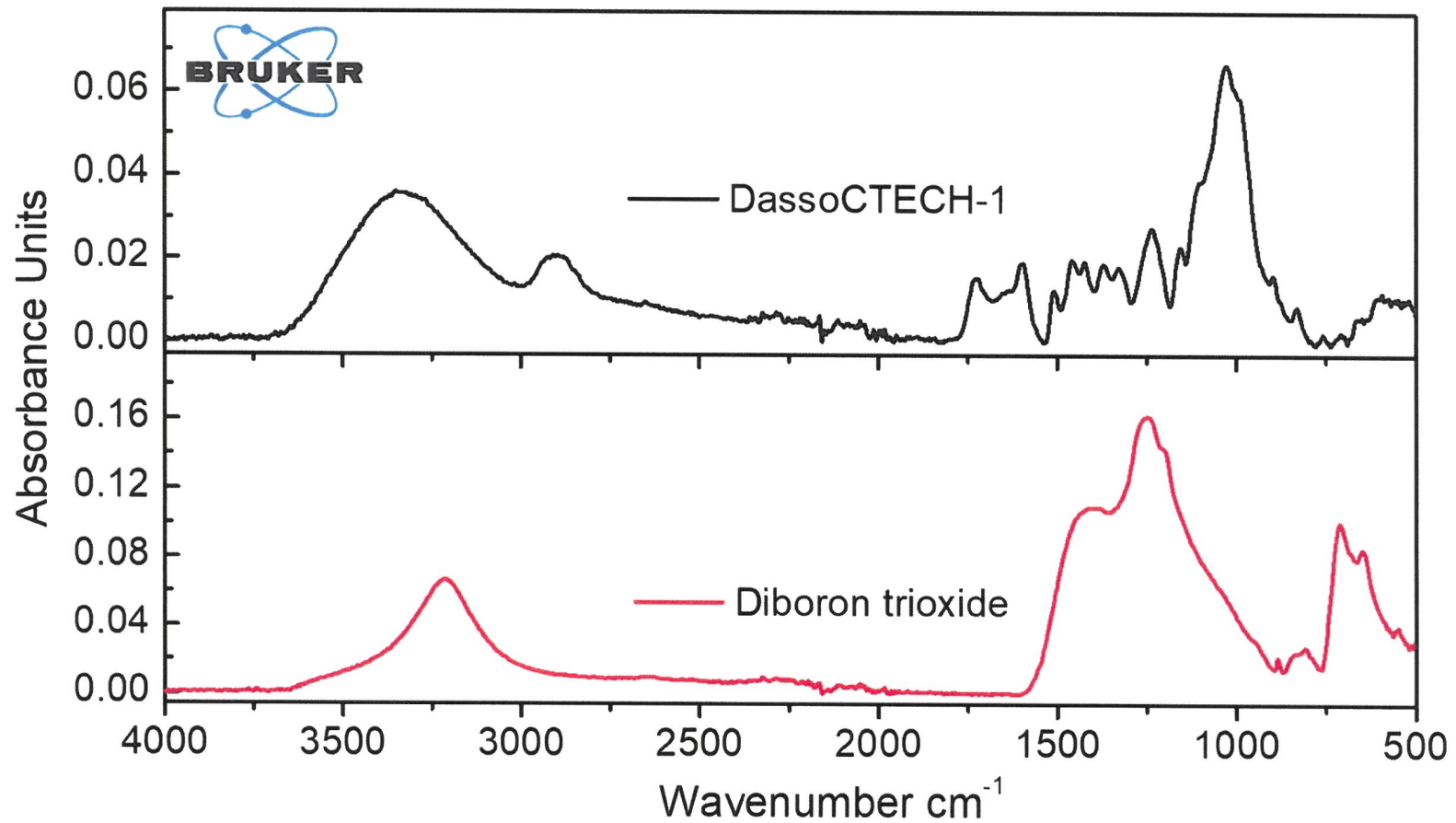
Prepared samples for FTIR tests

**Comments:**

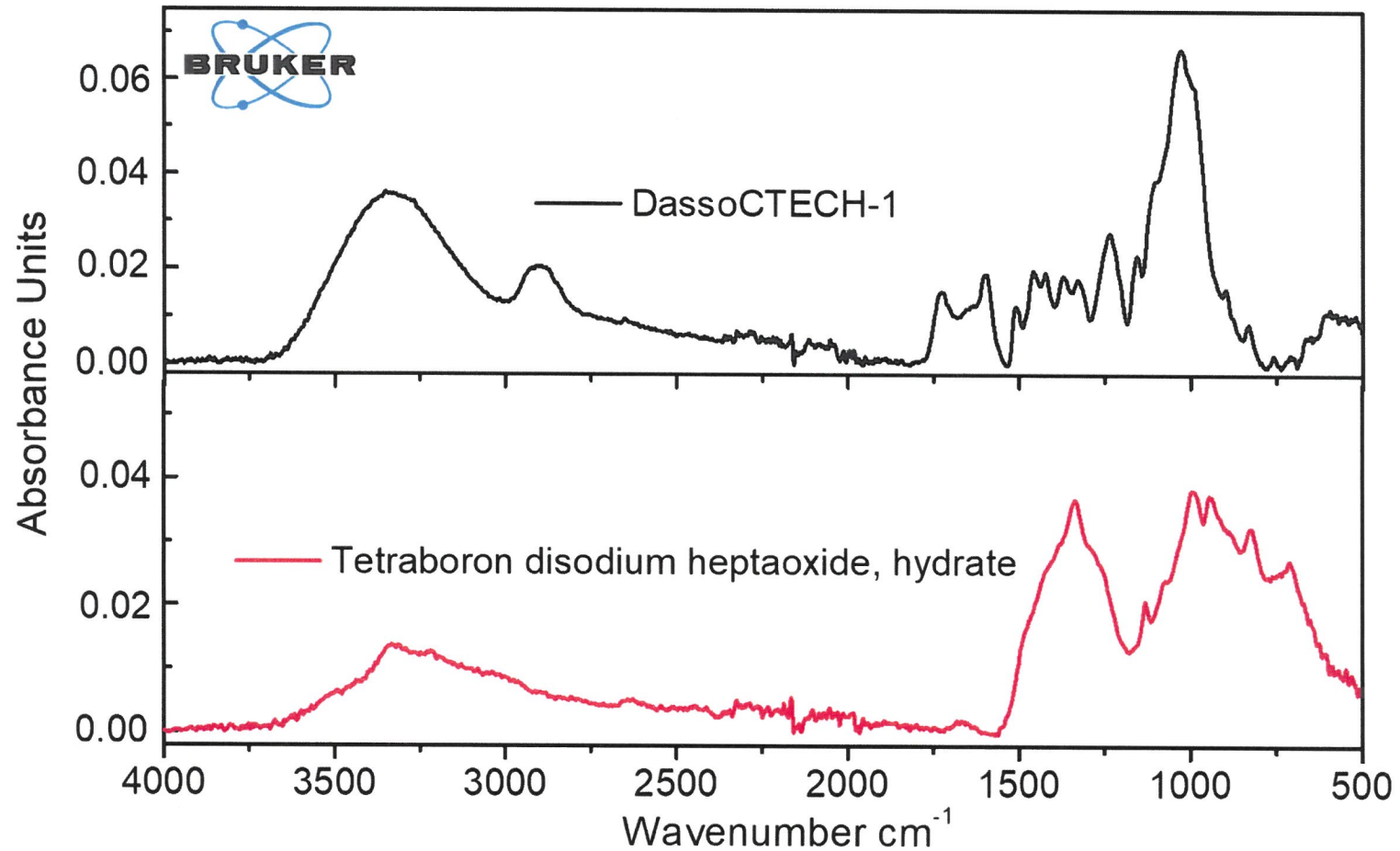
DassoCTECH-1 and DassoCTECH-2 were obtained from the inner and the surface part of the sample received from ZHEJIANG XINHAIYE BAMBOO TECHNOLOGY CO., LTD. As seen, the FTIR spectra of these two samples are totally the same without any external peaks appeared.

**Comments:**

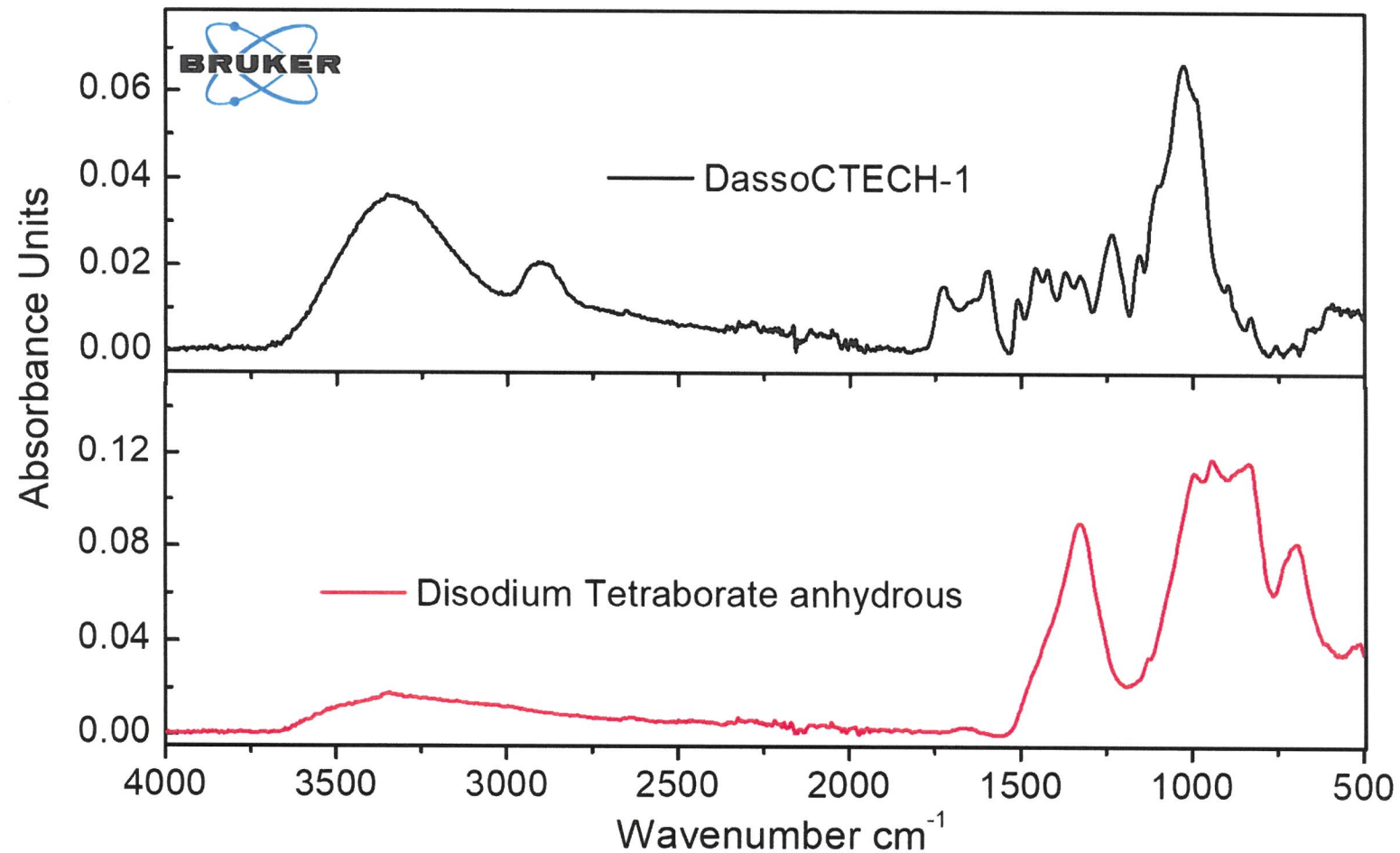
The characteristic peaks of boric acid (CAS# 10043-35-3) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain boric acid.

**Comments:**

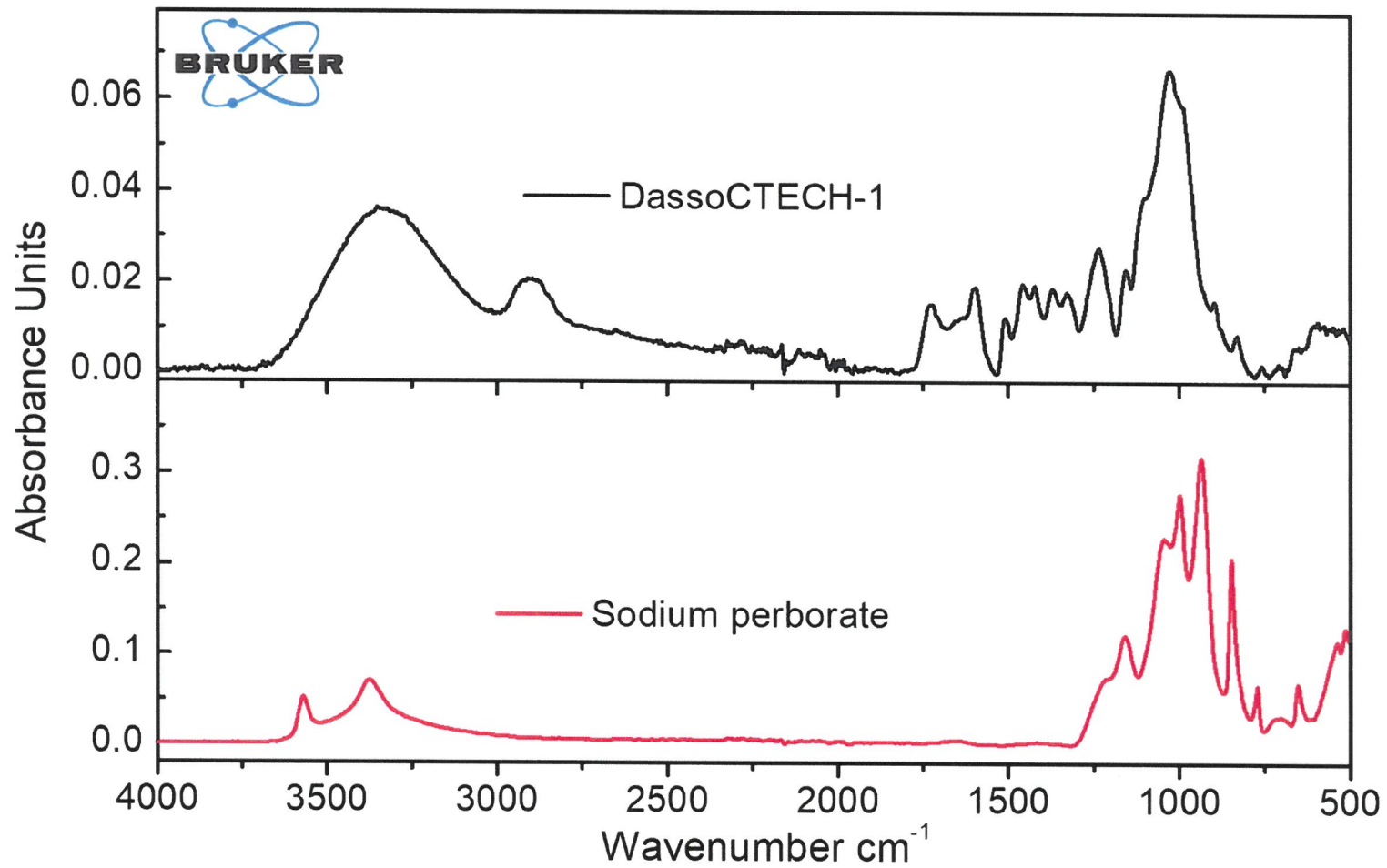
The characteristic peaks of diboron trioxide (CAS#1303-86-2) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain diboron trioxide.

**Comments:**

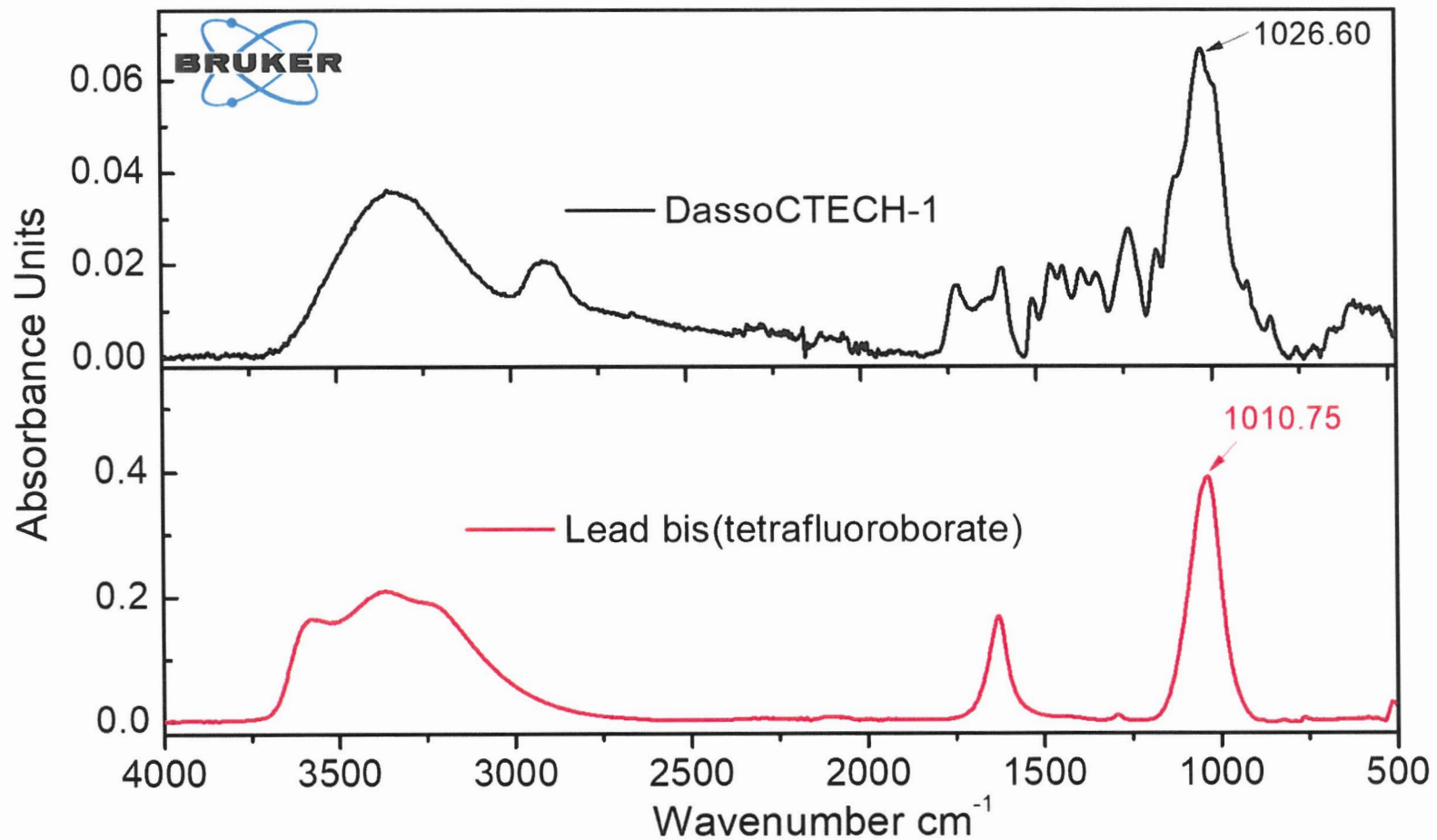
The characteristic peaks of tetraboron disodium heptaoxide, hydrate (CAS#12267-73-1) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain tetraboron disodium heptaoxide, hydrate.

**Comments:**

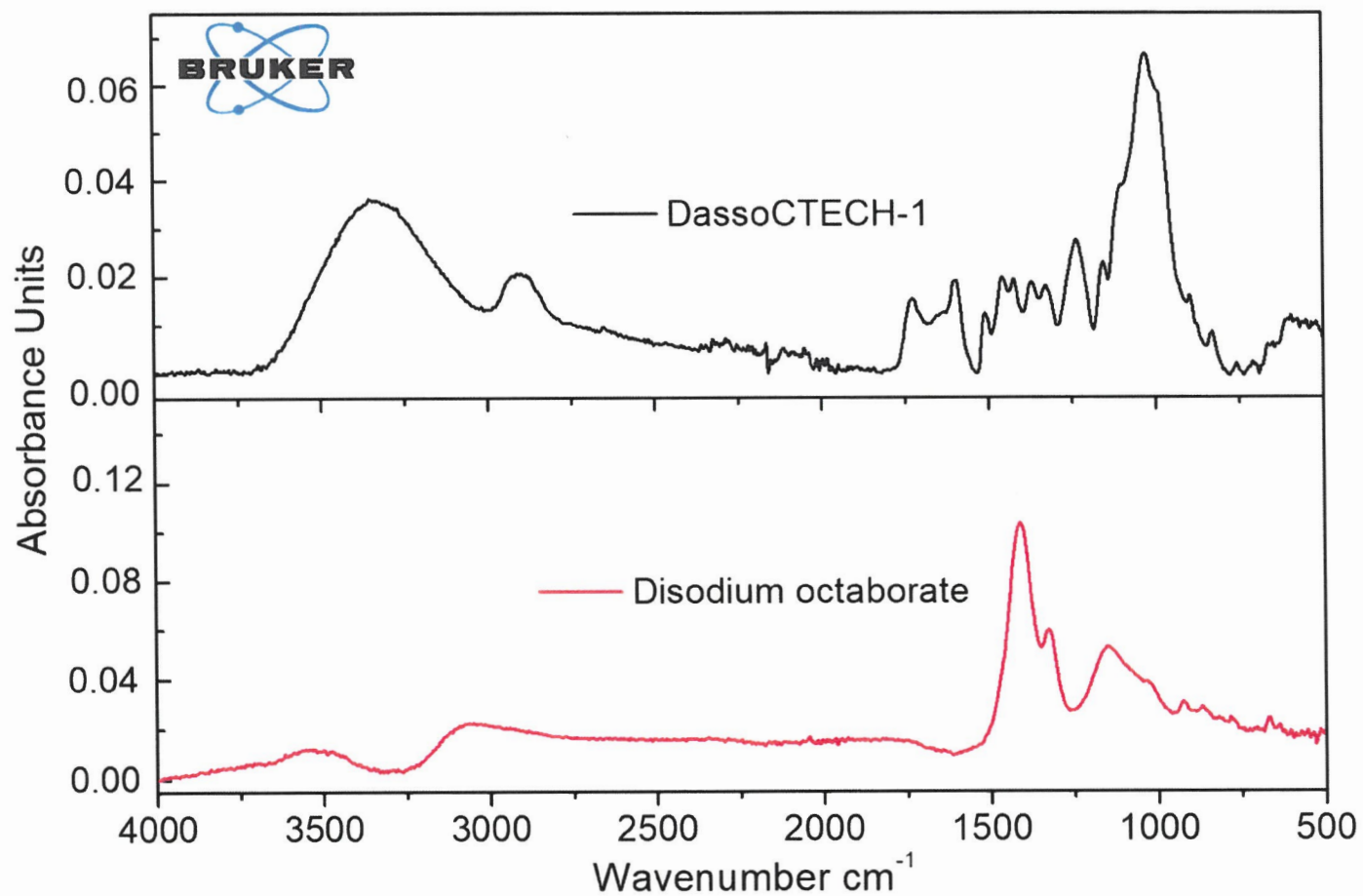
The characteristic peaks of disodium tetraborate anhydrous (CAS#1330-43-4) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain disodium tetraborate anhydrous.

**Comments:**

The characteristic peaks of sodium perborate (CAS#10332-33-9) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain sodium perborate.

**Comments:**

The characteristic peaks of lead bis(tetrafluoroborate) (CAS#13814-96-5) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain lead bis(tetrafluoroborate).

**Comments:**

The characteristic peaks of disodium octaborate (CAS#12008-41-2) can't be observed in the spectrum of DassoCTECH-1, which indicates that the DassoCTECH-1 sample doesn't contain disodium octaborate.