

Copper Sulfate, Calcium Chloride, Aluminium, what happened?

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I was recently massing some copper sulfate penthydrate in disposable aluminum foil "cupcake tins". By accident, I used a "tin" that had been previously used to mass some CaCl₂. When I began putting the copper sulfate into the tin, I heard a sizzling sound. I soon noticed that the aluminium cupcake tin was being dissolved as holes began to form in areas where crevices concealed some hidden, hydrated CaCl₂. My poor lab practice aside, why did this happen? I understand that the Al will replace the Cu in either copper sulfate or the formed copper chloride (with calcium sulfate as a precipitate), but why is the replacement reaction apparently so much more vigorous with copper chloride? Thanks for any constructive help...

-Dan Akers

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