

This is a worthwhile study, and I think it should see the light of day (i.e. be published) after some work on presentation.

This draft is greatly improved over the prior. Unfortunately the ms. is not currently ready. Although the text has been streamlined considerably (and I applaud the first author on the effort) the text is still confusing to follow.

The discussion of TTDs, for example, has been omitted from Section IV and moved to the supplement. Please, at least introduce, in the main manuscript, the idea (somewhere in section 4) of using $D/G = 0.2$ and $D/G = 1.8$ as a validity range (Waugh et al., 2003, or one of Hall's or Stoven's or Sonnerup's papers. Oh, and incidentally, this "valid range" is based on what is visible using the CFC / SF₆ pair and does not reflect what may actually be happening in the ocean.) Without this introduction, the TTD-based curves in Fig. 10, and the discussion of TTDs on p. 9 (line 32) and p. 10 (line 8) have little explanation and appear to come out of nowhere.

The summary section (and Fig. 10) often disagrees with the final sentence of section 5.3, in which are listed sea surface saturations from the Baltic station:

CFC-12	122 +- 8 %
HCFC-22	77 +- 8 %
HCFC-141b	74 +- 12 %
HCFC-142b	114 +- 2 %
HFC – 134a	125 +- 23 %
HFC – 125	252 +- 35 %

One would ordinarily conclude, from this list, that HCFC-142b, HFC-134a have solubility functions that are approximated reasonably, and that they are stable in seawater.

Jumping ahead to page 11:

For HCFC-141b one should note that the low saturation measured *in this paper* points to a problem with the solubility function, or degradation in seawater, or both.

For HCFC-142b – are the Baltic data omitted from Fig. 10? I interpret the Baltic results as promising and wonder if some of the analytical issues identified in the Med. are the reason for the high (they are profoundly high, not 'slightly', as suggested) values in Fig. 10?

I would recommend that the Baltic measurements be included in the 'Synopsis' for each tracer.

I started the process of identifying individual sentences that are confusing or could use some clarification, but concluded that the list would be too exhaustive. This is the authors' responsibility.

In summary, while the ms. is greatly improved, I would appreciate it if the authors would take three steps: 1) put some more effort into clarifying the presentation, 2) have peers/ colleagues go over it once or twice, and 3) let it sit for a few days, then go over it again before resubmitting. I stand by my original review statement that this is a worthwhile effort that should be published eventually.