Kiel Device Carousel Loading Procedure

Log onto the Mass Spec web page and click on the 'First time User' section. Carefully review the information so you understand the relationship between sample size and voltage and sample weight and expansion in the Kiel Device (see the pdf files showing these relationships).

1. Your samples ideally should weigh between 40-80ug, although we can analyze carbonates weighing as little as 15ug. The material should be 'clean' and free of organic contaminates. If any pyritization of the test is present, more material will be necessary to compensate for the weight of the pyrite.

2. Each sample identification must be logged onto a sheet called a 'loading setup sheet' (see load-tab.pdf). The information from this sheet is entered into the ISODAT software under Cnf-B, Edit-B, Sequence Editor. We use the date and year the carousel will be analyzed as the sequence table name (eg. 13jan01).

3. The sequence table is divided into three columns, each with 15 available characters, as follows:
   1) Sample ID [one column, no spaces] eg. **KNR159-5-14GGC**
   2) depth ID [two columns, separated by one space] eg. **35 cm**
   3) species ID [two columns, separated by one space] eg. **G. sacculifer**

SEQUENCE TABLE Sample Entry

sample ID	depth ID	species ID
OCE205-2-8JPC	34 cm	C. ariminensis

4. There are 40 unknowns and 6 standards (placed in A2/B2, A13/B13 and A24/B24) in each carousel. Because ours is a Kiel II, we have separate A and B lines. The A1 and B1 are empty vials used to hold vacuum when the machine is between samples or after a carousel has been analyzed.

5. If you have particularly small samples, (< 30ug) they are best placed in the carousel just before a reference gas refill noted on the loading setup sheet as 'rr'. Because the B line gives slightly better sample yield, the spaces on the B line before an A line ref refill are the 'best' spots for the smallest samples.