

**PACKAGE ID** - 000636IBMPC00 ALPHA,AMPU

**KWIC TITLE** - Alpha-Emitter Activity Calculation

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**LIMITATION CODE** -UNL                   **AUDIENCE CODE** - UNL

**COMPLETION DATE** - 03/01/1986   **PUBLICATION DATE** - 03/01/1986

**DESCRIPTION** - The two computer programs, ALPHA and AMPU, take raw data obtained from alpha spectrometry and from these calculate activities and uncertainties of the radionuclides present in the sample. ALPHA determines activities of any alpha emitter in a sample that has been directly precipitated with Ndf3. AMPU determines the Pu239, Pu238, and Am241 activities using Pu236 and Am243 tracers.

**PACKAGE CONTENTS** - Media Directory; Software Abstract; Media Includes Source Code, Sample Problem Output;

**SOURCE CODE INCLUDED?** - Yes

**MEDIA QUANTITY** - 1 5.25 Diskette

**METHOD OF SOLUTION** - These programs propagate all random and systematic uncertainties, found anywhere in the experimental process, to the final result. The result is rounded and is in decimal agreement with the uncertainty.

**COMPUTER** - IBM PC

**OPERATING SYSTEMS** - DOS 2.1;3.3

**PROGRAMMING LANGUAGES** - BASIC

**SOFTWARE LIMITATIONS** - In ALPHA, a chemical yield of 98% is assumed.

**SOURCE CODE AVAILABLE (Y/N)** - Y

**OTHER PROG/OPER SYS INFO** - All data for standard solutions, counting efficiencies, etc. are included in the program source and must be modified as appropriate.

**HARDWARE REQS** - Approximately 12 Kbytes of memory are required for each program.

**ABSTRACT STATUS** - Abstract first distributed April 1986. IBM PC version submitted March 1986, sample problem executed by NEADB November 1990 on an IBM PC/AT.

**SUBJECT CLASS CODE** - WU

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**KEYWORDS** -

COMPUTER PROGRAM DOCUMENTATION  
A CODES  
ALPHA DECAY  
PLUTONIUM ISOTOPES  
RADIOACTIVITY  
ALPHA SPECTROMETERS  
ALPHA DETECTION  
RADIOISOTOPES

**EDB SUBJECT CATEGORIES** -

990200 663210

**SPONSOR** - DOE/RW

**PACKAGE TYPE** - TESTED