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The Comprehensive Nuclear-Test-Ban Treaty Organisation's International Data Centre (IDC) receives atmospheric radioactivity and meteorological data via satellite linkages from particulate monitoring stations and laboratories comprising the International Monitoring System. Noble-gas monitoring will be included later after final development. The IDC is a processing hub through which raw data and analysis results flow to National Data Centres (NDC) of Treaty Member States. Data are processed automatically upon receipt, and then interactively reviewed by specially trained analysts who rapidly check and correct the results of automatic processing using tools designed for the purpose. Results of processing and review are distributed to Treaty Member States. Data are screened for detection of CTBT-relevant radionuclides to flag potentially significant results for closer attention at NDCs. High-resolution gamma spectroscopy is used for particulate analyses, while noble-gas monitoring will also include beta-gamma coincidence-counting systems. Atmospheric back-tracking for source location is included in the IDC functions. The paper describes the role of the IDC in this verification effort, the types of radionuclide monitoring data received, and the automatic and interactive processing systems used. Interesting issues and observations, and areas requiring further development during preparation for Treaty Entry-Into-Force are described.

264 USE OF THERMAL NEUTRONS TO PERFORM CLINICAL ANALYSES IN BLOOD AND URINE SAMPLES. . L. C. Oliveira[1], C. B. Zamboni [1], F. A. Genezini[1], A. M. G. Figueiredo*[1], G. S. Zahn[1], A. C. Cestari[1,2]. [1]Instituto de Pesquisas Energéticas e Nucleares, IPEN/CNEN-SP, Brasil. [2]Universidade Santo Amaro, UNISA-SP, BRASIL.

In the health field it is usual to perform clinical examination in blood and urine samples to identify anomalies in organs. These analyses aim to observe if there are changes associated to the measured concentrations of elements in biological samples; all these conventional analysis techniques, though, are very expensive and need large samples of the biological materials, 2 to 5ml for each examination. In this study we show that the Absolute Neutron Activation Analysis technique can be used to perform clinical analyses, with many advantages towards the traditional method. For this purpose, the Cadmium Ratio technique was used for the measurement of thermal flux distribution and the concentrations of elements in the biological samples were obtained. In comparison to the conventional techniques, it is an alternative method for the diagnostic of anomalies in organs that uses smaller quantities of the samples (~200µl); it also allows the simultaneous evaluation of several elements' concentrations in the biological samples at once, something not always possible in the conventional clinical analysis. Another important advantage, it eliminates the need to use standard material, thus making the analyzing process agile, practical and also economic in researches that involves clinical evaluation of small animals (rats, poultry, rabbits, etc).

265 ACCELERATOR MASS SPECTROMETRY OF IODINE-129: TECHNIQUE AND APPLICATIONS. W. E. Kieser*[1], X. L. Zhao[1], C. Y. Soto[1], B. Tracy[2] and J. N. Smith[3]. [1] IsoTrace Laboratory, University of Toronto, Toronto, ON M5S 1A7 Canada, [2] Radiation Protection Bureau, Health Canada, Ottawa, ON K1A 1C1 Canada, [3] Bedford Institute of Oceanography, Dartmouth, NS B2Y 4A2 CANADA

Accelerator Mass Spectrometry (AMS) has revolutionized radiocarbon analysis by counting atoms instead of beta particles and thus allowing much smaller samples to be measured in short times with appropriate precision. Similar benefits are possible from the AMS analysis of ^{129}I, although different sample preparation and instrumental analysis techniques are required. The ability to analyse small air filter samples has enabled us to study the use of ^{129}I (half-life of 1.57×10^7 a) as a proxy in the environment for the shorter lived iodine isotopes ^{131}I and ^{125}I and to investigate isolated events in which radioactivity is atmospherically transported into the arctic. Similarly, the existence of point sources of ^{129}I (Sellafield on the Irish Sea and La Hague on the English Channel) and the ability to analyse seawater samples as small as 0.25 l, have led to a number of