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The X-Ray Radiography's numeric density princibles , advantages and its correlations with XRF-XRD-Mass spectrometry and Gamma RAY density method.

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The results of Density measurement has relative characteristics belong to changing conditions even at measurement time. The compression load related physical and chemical changings or lithologic metamorfism is out of this paper's scoop as other effects releated on all stages of storage and measurement processes. We know that all changings provide hard complexity to wide range of research. But simplicated explanation of Density measurements about validity is acceptable when corrolated with other methods. X-Ray and Gamma-Ray density are compatible with each other's result when obtained at the same time sediment core measurements on the same volume of exposing to radiation. Because that methods gives let for full packaged measuring without loss of content's component. Thus loss of water is blocked without misleading changings releated volume – density or haline condition's newly crystallisation. X-Ray density method has advantages like provide numeric data from main texture of sediments and its another positive side is its visional data which nowadays we are using for intersection emphasizing of sediments for structural analysis. High or less dense macro rare materials can be visual with X-Ray imaging for discrimination but Gamma Ray measurement accepts density values from integrated in main texture density as their volumetric dimensions.
Main texture's datas are mostly related with elemental or crystal analyses. Rare volumetric materials like pebbles, air voids, liquid inclusion or fossiles must be defeated during that analyses for eliminate wrong results. Same acceptence must be applicated for density data during its graphical correlations with XRF or Mass Spectrometry Elements. Linear CCD radiography cameras have paralel photon stimulated cells placed at the row and they gives Photonic crush-Electric voltage peak conversation. Recorded increasing voltage's mean is low density at the scan point. Record folder holds that data series at seperate columns as a same number as total cells at the row of CCD sensor. By the help of radiography image we can take partial U channel from half sediment core with consider jump areas to side column for taking next partial U-channel sample without consist rare material. Thus providing density data from purificated main sediment texture is OK. Elemental comparisons , climatic or representing of sedimantologic processes then will be more realistic with high resolution. Datas provided here EMCOL labarotory's Swedish originated Itrax XRF radiographer.
Rectangular CCD sensor fields need powerful Xray tubes and provide beam homogeneity is difficult unlike for line CCD. This paper emphasises importance of armored full close density measurements for both of X-Ray and Gamma Ray density methods. U channel type sample form acceptable but we must take care about needs of collimator during gamma ray exposure if possible, because of thin samples can let to direct reachment of radiative beams from source to sensor without inside travelling at sample. U channels must take by experienced people because it needs cautious for trapped air voids at process of u-channel providing.