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Noninvasive Online Measurement of Genome Lengths of Mammalian Tissues in Bulk by 14 MeV Neutron Atometry BOGDAN MAGLICH, ANNA RADOVIC, CHRISTIAN DRUEY, California Science & Engineering Corporation — Genome length, L=, no. of DNA nucleotide base pairs in cell of bovine (b) and porcine (p) tissues, closest to human genome, were hitherto measured by *genomic sequencing* L_b=3, L_p=2.7 Giga base pairs [1,2] (Gbp) errors not given. - We report measurements of L_b/L_p and L_b, L_p *without* sequencing by *atometry* [3,4]. No. of O and C atoms, N, in nucleotide molecules, was obtained from prompt γ rate, G, emitted in inel. scatt. 14 MeV neutrons, with nuclei of C, O, in nucleotide molecule. Since G prop. N, $L_b/L_p=G_b/G_p$. p and b meat was irradiated for 30'. From msd G we obtained $L_b/L_p=1.28\pm0.02$ 16% greater than [1,2]. We got absolute L_b=1.65/f, L_p=1.28/f Gbp, $0.3<f<0.6$ by irradiating 3 DNA's and calibrating γ/O and γ/C.

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