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- (81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI,

(54) Title: METHOD AND DEVICE FOR SIGNAL COLLECTION

(54) 发明名称: 用于信号采集的方法和设备

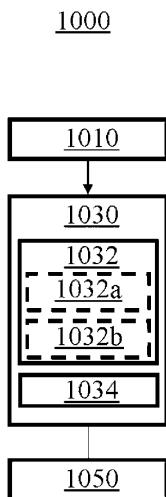


图 10

(57) Abstract: A method for performing signal collection on fluorescence emitted by an object to be subjected to detection in a sample, and a device for signal collection. The method for performing signal collection on fluorescence emitted by an object to be subjected to detection in a sample comprises the following steps: performing photoelectric detection on fluorescence (205) which is emitted by an object (203) to be subjected to detection in a sample (202), so as to generate an electrical signal; integrating the electrical signal; collecting the integrated electrical signal; and in response to a trigger indication (512), releasing, within a time period, more than 90% of charges which are accumulated in a charge integrator (210) used for integrating the electrical signal, wherein the time period is less than 15% of a half-peak full width of a time-domain waveform (B) that reflects the light intensity of the fluorescence. By means of releasing most of the accumulated charges in a timely manner within a short time during the process of integrating an electrical signal which is generated during fluorescence detection, the problem of the dynamic range of a fluorescence detector being insufficient is effectively solved, such that the dynamic range of the fluorescence detector can be expanded.

(57) 摘要: 一种用于对样品中待测物发出的荧光进行信号采集的方法和用于信号采集的设备。用于对样品中待测物发出的荧光进行信号采集的方法包括以下步骤: 对样品(202)中的待测物(203)发出的荧光(205)进行光电检测, 以生成电信号; 对电信号进行积分; 采集经积分的电信号; 以及响应于触发指示(512), 在一段时间段内释放在用于对电信号进行积分的电荷积分器(210)中累积的电荷中的大于90%的电荷, 该时间段小于反映荧光的光强度的时域波形(B)的半峰值全宽度的15%。通过在对荧光检测中产生的电信号进行积分的过程中及时地在短时间内释放大部分累积的电荷, 有效地解决荧光检测器的动态范围不足的问题, 能够提高荧光检测器的动态范围。

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- (84) 指定国(除另有指明，要求每一种可提供的地区保护): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

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