Hemoglobin in samples with leukocytosis can be measured on ABL 700 series blood gas analyzers
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present there are no laboratory strategies to detect manipulated genes because these products would be almost indistinguishable from the endogenous molecule. The potential scenarios are detrimental. For example, the recently developed technique to differentiate recombinant erythropoietin from the natural protein, based on isoelectric focusing and reported in a recent issue of this journal (2), would be ineffective in identifying products of the up-regulation of the gene encoding for human erythropoietin. Additionally, despite an increasing commitment of the World Anti-doping Agency, who recently hosted a conference on the potential for gene doping, the detection of gene cheats might be further hampered by the diversity in athletic abilities, sport disciplines, and genetic polymorphisms associated with enhanced athletic performance.

References

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Hemoglobin in Samples with Leukocytosis Can Be Measured on ABL 700 Series Blood Gas Analyzers

To the Editor:

Automated hematology analyzers are prone to spuriously increased hemoglobin (Hb) results in the presence of high leukocyte counts. Interference becomes significant above 50 × 10⁶ leukocytes/L (1). Therefore, in patients with high leukocyte counts, Hb concentrations may have to be measured with alternative methods. Many laboratories use the manual hemiglobincyanide method (2) for Hb measurements in samples from patients with high leukocyte counts. This method is commonly considered as a reference procedure (3).

For daily routine it would be convenient to have a less labor- and time-consuming method available to measure Hb in patient samples with high leukocyte counts. We therefore investigated whether samples with leukocytes >50 × 10⁶/L can be measured reliably on an ABL 700 series blood gas analyzer (Radiometer Copenhagen) if they were collected in K3EDTA Vacutainer Tubes (BD). On the ABL 725, 1 μL of blood is ultrasonically hemolyzed in the cooximeter, and a continuous spectrum derived from 128 wavelengths between 478 and 672 nm is used to calculate the Hb concentration in the sample (4). Results generated by the ABL 725 were compared with Hb concentrations obtained with the manual hemiglobincyanide method. Commercial reagents, calibrators, and controls (J.T. Baker) were used in the manual Hb determination. To remove unlysed white blood cells, samples with high leukocyte count were centrifuged for 10 min at 2400g before the Hb in the supernatant was measured spectrophotometrically at 540 nm.

The Passing–Bablok comparison in Fig. 1 shows good agreement between the two methods for measuring Hb concentrations. The slope does not differ significantly from 1.0.
Detection of SARS Coronavirus RNA in the Cerebrospinal Fluid of a Patient with Severe Acute Respiratory Syndrome

To the Editor:
Severe acute respiratory syndrome (SARS) is a recently emerged disease caused by a novel coronavirus, the SARS coronavirus (SARS-CoV) (1, 2). Although the respiratory manifestations of SARS are well recognized, the neurologic manifestations have been much less studied (1). Here we report a SARS patient with clinical and laboratory evidence of neurologic involvement.

A 59-year-old woman with IgA nephropathy was admitted to the Prince of Wales Hospital in Hong Kong in early May 2003 because of swelling fever, chills, productive cough, and diarrhea. She was previously admitted in April with fungal peritonitis related to her peritoneal dialysis. Despite antifungal and antibiotic therapy, her respiratory function deteriorated. She became increasingly dyspneic and required supplemental oxygen. High-resolution computer tomography of the thorax revealed progressive bilateral consolidation. On day 5 of admission, she began to vomit, and episodes of four-limb twitching were documented. Within a few hours, she became confused and disoriented.

Laboratory investigation showed electrolyte and blood pH values within the appropriate reference intervals and a static urea of 20 mmol/L. Seizures recurred despite anticonvulsant treatment. She became confused and disorientated. Laboratory investigation showed electrolyte and blood pH values within the appropriate reference intervals and a static urea of 20 mmol/L. Seizures recurred despite anticonvulsant treatment. She became confused and disorientated.

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In conclusion, Hb measurements on an ABL 700 series blood gas analyzer in samples with a leukocyte count that may interfere with Hb measurements on the ABL. The bias between the hemoglobin cyanide method and the ABL is independent of Hb concentration and leukocyte count; it thus may be attributable to differences in standardization.

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