BACKGROUND: Transport of blood gas samples via a pneumatic tube system and subsequent analysis in the central laboratory can reduce costs and errors compared to on-site testing in the operating theatre or the intensive care unit. In this study, a modern pneumatic tube transport system was tested for its usability for this purpose. METHODS: A total of 4 consecutive blood gas samples were obtained intraoperatively from 54 different patients and sent to the central laboratory. Of these, 3 samples were transferred using the pneumatic tube system but by different methods and 1 sample was transported personally which served as a reference. The results of sample analysis concerning blood gases, electrolytes and haemoglobin were compared and examined for differences. RESULTS: No statistically significant differences could be determined between the different modes of transportation.

CONCLUSION: Transport of samples for blood gas analysis via a modern pneumatic tube system is safe when samples are correctly prepared.