traction (SPE) without necessity of hydrolysis. Urine sample is necessary to pass through an acid hydrolysis. During this procedure, releasing of conjugated metanephrines from a bond is happened. Hydrolysis is folloved by SPE. Eluted samples are applied onto a HPLC reversed phase column.

Results: The sensitivity and specificity of methods in tumor diagnosis has been calculated. It has been shown that the sensitivity of both methods has reached 100%, the specificity of methods is lower (94% for the HPLC-ED method and 80% for the HPLC-FLD).

Conclusions: The sensitivity shows excellent ability of both methods to recognize the patients with PHEO. Weaker specificity mainly of the HPLC-FLD method rarely admits false-positive results.

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P08 – Evaluation of analytical systems

P08-01

Evaluation of the Sysmex UF-1000i urinanalyzer

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Background: The aim of this study was to compare the results of Sysmex UF 1000i analyzer for red blood cells (RBC), white blood cells (WBC), epithel cells (EPI), small round cells (SRC) and pathological cast against manual microscopy of uncentrifuged urine specimens using Fuchs-Rosenthal cell counting chamber.

Materials and methods: Sample size: 500 outpatient urines. Carryover, precision, Passing&Bablok regression, Pearson correlation, Receiver Operating Curves (ROC) and diagnostic accuracy were tested.

Results: Carry over: 0.465% for RBC, 0.117% for WBC 0,19%, for EPI and 0.058% for BACT. Within-run imprecision of cell counts expressed as CV% (mean cell count/µl) was found for RBC 6.86%, for WBC 6.97%, for EPI 35%. Between run imprecision was carried out in 30 replicates of two urine control at different concentrations for RBC, WBC, EPI, BACT, and CAST. The mean and CV% was calculated. Passing-Bablok regression were determined for RBC: y = -0.0321 + 1.0383x, for WBC: y = -0.2990 + 1.0499x, for EPI y = 0.2285 + 1.0191x, for SRC y = -0.2161 + 1.6129x, for CAST y = 0.0 + 4.2666x, respectively. Diagnostic accuracy of Sysmex UF1000i showed the following results: 93.2% for RBC, 97.2% for WBC, 92.6% for EPI, 97% for SRC and 60.0% for PC. (Further results: Sensitivity data are: RBC: 96.4%, WBC: 98.0%, EPI: 96.7%, SRC: 60.0%, PC: 79.6%. Specificity data are: RBC: 90.5%, WBC: 95.1%, EPI: 89.7%, SRC: 98.2%, PC: 56.9%.)

Conclusion: Sysmex UF 1000i urine analyzer eliminated manual sample preparation. It has proven good precision for analyzing cellular elements.

P08-02

Evaluating performance of Cobas c311 and Cobas c501 in the emergency laboratory setting

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Background: The aim of our study was to perform the analytical validation of the automated biochemistry analyzers Cobas c311 and c501 (Roche Diagnostics, Germany), for the purposes of the emergency laboratory.

Materials and methods: Validation included assessment of within-day (N = 30) and between-day imprecision (N = 30), inaccuracy (bias) (N = 30), linearity and method comparison with the hitherto used analyzer Olympus AU2700 (N = 30). Statistical

analysis was performed and the results were judged by comparing with the specifications according to Westgard.

Results: Statistical analysis fulfilled almost all required criteria. Within-day and between-day imprecision, evaluated at two levels, for all analytes on both analyzers revealed acceptable coefficients of variation (CV < 5%). Bias for calcium, glucose, total proteins and urea on Cobas c311 was beyond the range of desirable specifications while on Cobas c501 only bias for chlorides exceeded the recommended value. For all analytes, the range of linearity defined by the manufacturer was proved. According to the Passing-Bablok regression analysis, the results of the comparison study showed statistically negligible deviations except for direct bilirubin and CRP for which proportional error was identified. Moreover, method comparison yielded high coefficients of correlation (r > 0.95) for all analytes determined on both analyzers.

Conclusion: Cobas analyzers show acceptable precision and accuracy for all but a few analytes for which slight adjustment of the instrument factor is required, meet the established requirements and specifications and therefore can be implemented in routine laboratory work. However, the performance of Cobas c311 does not meet the turnaround time for the high throughput emergency laboratory requirements.

P08-03

Analytical performance of the OC-Sensor DIANA immunochemical faecal occult blood test

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Background: The automated analyzer, OC-Sensor DIANA (Eiken Chemical Co., Ltd., Japan), will be used in the 'FIT for Follow-Up' study. The study will investigate the three-year programme sensitivity of an annual faecal immunochemical test (FIT) for haemoglobin (Hb) for the detection of advanced adenomas or colorectal cancer in patients diagnosed with intermediate risk polyps through the NHS Bowel Cancer Screening Programme.

Materials and methods: The analytical performance of DIANA was evaluated using buffered Hb solutions and compared with that reported in 2009.

Results: The Clinical and Laboratory Standards Institute (CLSI) five-day imprecision protocol demonstrated good within-assay and total imprecision at concentrations > 159 ng Hb/mL buffer (CV < 1.7% and < 3.4% respectively). Within-assay and total imprecision at 43 ng/mL was poor (CV 11.5%). The manufacturers do not recommend the use of quantitative results < 50 ng/mL. The QC materials containing average concentrations of 84, 152 and 658 ng/mL gave within-assay CVs of < 1.3% and for control material with average concentrations of 153 and 655 ng/mL it gave day-to-day CVs of < 2.6%. The assay was linear between 45 and 930 ng/mL supporting the manufacturer's claimed measuring range of 50–1000 ng/mL. The regression equations from 2011 (y = 1.03x-4.99) and 2009 (y = 1.06x+8.54) were similar. The analyzer's sample carry-over effect in both evaluations was well within acceptable limits for interaction at < 0.5%.

Conclusion: Analyzer performance was consistent with manufacturer's claims. 'Baseline' performance will be compared with future evaluations performed at regular intervals throughout the course of the 'FIT for Follow-Up' study.

P08-04

Evaluation and validation of the Cobas 6000 analyzer series modules c501: the urine analytes

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Background: The aim of study was to assess the analytical performance of the Cobas 6000 analyzer series modules c501 (Roche Diagnostics) and to validate it in our routine set of urine analytes.

Materials and methods: We investigated 12 routine urine analytes tests (amylase, glucose, urea, creatinine, urate, total proteins, sodium, potassium, chloride, calcium, phosphate, magnesium) on two modules c501 (R1+R2). The evaluation protocol consisted of imprecision: within-run (10 sequential runs) and between-run (10 consecutive working days, 2 sequential runs) with commercial controls (Liquicheck, Biorad; Precinorm PUC/Precipath PUC, Roche), inaccuracy (N = 20), and method comparison (routine urine samples, N = 30) vs. Beckman Coulter AU640.

Results: All analytes on both modules have within-run imprecision < 3%, except phosphate and magnesium (R2). For all analytes between-run imprecision was < 5%. All analytes fulfilled quality requirements for imprecision and for total error. A quality requirement for inaccuracy was met by all analytes on both modules with exception of urate on R1 and amylase on R1+R2. The correlation with comparison method showed no difference between methods for glucose, amylase, urea, sodium, phosphate, magnesium on R2 and for potassium, amylase, urea on R1. Constant difference was observed for five analytes on R1, and three on R2. Proportional difference was found for five analytes on R1, and two on R2. Two tests need further investigation, chloride on R1, and creatinine on both modules, due to significant deviation from linearity.

Conclusions: Cobas 6000 analyzer showed optimal analytical performance with mostly fulfilled quality control requirements and acceptable method comparisons for urine analytes.

P08-05

Differences between bromcresol green and bromcresol purple measured albumin

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Background: Usually, albumin is measured by techniques employing dye-binding assays: bromcresol green (BCG) and bromcresol purple (BCP). In management of an individual patient with albumin results from different laboratories, the appreciation of the methodology used and the ability to convert results between methods will be helpful.

Material and methods: 85 plasma and 80 serum samples were analyzed by BCP(DimensionRX- Siemens) and BCG (Advia2400-Siemens) methods. Of these, 75 serum samples were also run on capillary zone electrophoresis (CZE). Significant differences were determined by Student paired-t and ANOVA tests, using MedCalc. Significance was set at $P < 0.05$. Passing-Bablok regression, Bland-Altman plots and Pearson correlation were used to examine the relationship between methods.

Results: Correlation AlbBCG and AlbBCP was $r = 0.948$ ($P < 0.01$), but the mean difference was large 6.42g/L (CI 95%mean: 5.88-6.96) ($P < 0.01$). The regression equation was AlbBCG = 0.784 AlbBCP + 12.58. Bland-Altman plots shows greater bias at lower albumin concentrations. For the normal concentration group (G1; AlbBCP ≥ 35 g/L), mild hypoalbuminemia (G2; 30-35 g/L), moderate hypoalbuminemia (G3; 20-29 g/L) and severe hypoalbuminemia (G4; ≤ 20 g/L), mean differences were 3.07 g/L, 6.33 g/L, 7.50 g/L and 9.92 g/L respectively (ANOVA; $P < 0.01$). Using the Newman-Keuls

post-hoc test, differences were found between G1 *vs*. G2, G3 and G4 as well as between G4 versus G2 and G3 ($P < 0.05$). Also, a positive bias was observed between BCG/CZE (mean 3.54 g/L) and good correlation between CZE/BCP with a mean difference < 1g/L.

Conclusion: Albumin results from BCP and BCG methods may result in unacceptable differences and clinical confusion. The BCP method is superior method to evaluate the serum albumin levels, due to BCP albumin is more specific than BCG.

P08-06

Sodium measurements in urine by the patient at home: primary limitations overcome

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Background: It might be useful if hypertensive patients can self-monitor their sodium intake by assessing sodium excretion in urine at home.

Materials and methods: We evaluated a novel system, consisting of disposable syringes + LabChips and the Medimate Multireader, intended for POC sodium measurements in human urine, using moving boundary and capillary zone electrophoresis and conductivity detection. The system was compared to the Roche Modular ISE (standard laboratory method) and IL 943 flame photometer (gold standard), and precision was determined. Ease of use was evaluated by two experienced laboratory technicians.

Results: We compared the Multireader to both laboratory methods for 38 different 24-hour urine specimens (range: 33-195 mmol/L): > 5% of results were outside the allowable total error interval (+/-28.8%). Multireader CVs were 6.6% and 16.4% at a level of 156 and 52 mmol/L sodium, respectively (with CVs in the 1-2% and 0.1-0.2% range for ISE and flame photometry, respectively). Accordingly, the software algorithm converting electropherograms to sodium concentrations was adapted. The Multireader was then compared to flame photometry in a set of new experiments: none of 14 results (range: 70-302 mmol/L) showed significant bias. Multireader CVs were 2.2% and 3.1% at a level of 108 and 313 mmol/L, respectively. The new algorithm therefore shows an evident improvement in analytical performance. Despite several innovations, ease of use remained underdeveloped.

Conclusions: Although analytical CVs are considerably higher, the POC method seems clinically equivalent to flame photometry. The novel system is definitely promising, but its ease of use has to be improved.

P08-07

Evaluation and validation of the Cobas 6000 analyzer modules c501: the routine serum analytes

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Background: The aim of the study was to assess the analytical performance of the Cobas 6000 analyzer series modules c501 (Roche Diagnostics) and to validate it in routine set of serum analytes.

Materials and methods: We investigated complete routine serum tests for 36 analytes and preliminary present the results for cholesterol, HDL, LDL, triglycerides, uric acid, iron, and UIBC on two modules c501 (R1+R2) plus ACE (R1), and cooper (R2). The evaluation protocol consisted of imprecision: within-run (10 sequential runs) and between-run (10 consecutive working days, 2 sequential runs) with commercial controls (PreciControl ClinChem Multi 1/2, Roche; HumAsy Control 2/3, Randox; ACE controls N/H, Bühlmann), inaccuracy

(N = 20), and method comparison (routine serum samples, N = 30) *vs*. Beckman Coulter AU640.

Results: The majority of analytes on the assigned modules have a within-run imprecision < 2%. For all analytes, except cooper and UIBC, the between-run imprecision was < 3%. Quality requirements for imprecision and total error were met by all analytes on the assigned modules, excluding cooper. Quality requirement for inaccuracy were fulfilled by all analytes with the exception of HDL (R2). The correlation with comparison method showed no difference between methods for cholesterol, LDL, cooper, uric acid, and ACE on the assigned modules. Triglycerides and HDL showed some difference on both modules. UIBC and triglycerides on R1, due to significant deviation from linearity need further investigation.

Conclusions: These preliminary results showed that Cobas 6000 analyzer has optimal analytical performance with mostly fulfilled quality control requirements and acceptable method comparisons for our routine serum analytes.

P08-08

Normalized MEDx chart – useful tool for quick assessment of multiple method performance

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Background: Method validation includes determination of inaccuracy (bias) and imprecision (CV) which represent systemic and random error respectively, and which are basic parameters for calculation of total error (TE). Each method is evaluated regarding its recommended quality specification. Aim of this presentation is to introduce normalized MEDx chart, a simple graphical method for quick assessment of analytical method performance when multiple methods are validated simultaneously.

Materials and methods: Data were collected from method validation study performed on Roche Cobas 6000 analyzer c501 (Roche, Germany) (published in *Biochemia Medica* 2011;21(2):182-90). TE is calculated according to equation: TE = Bias + σCV where σ stands for desired confidence level (σ=2-6). This equation is the basis for MEDx chart where each method is presented as operating point defined by Bias on y-axis and CV on x-axis. Several criteria for σ value are presented on the chart according to which method performance is classified. If imprecision and inaccuracy are expressed as percentage of TE and such adjustment of x and y axis scaling is made than all operating points can be presented on the same chart called normalized MEDx chart.

Results: Validation of 30 analytical methods performance at Roche Cobas 6000 biochemistry analyzer are presented graphically as normalized MEDx chart.

Conclusion: Normalized MEDx chart is useful tool for comprehensive presentation of validation data and quick overall judgment of analyzer performance according to recommended quality specifications. Chart is easy to create and even easier to interpret as opposed to comparing numerous figures and analyzing large tables.

P08-09

Evaluation of haematological analyzer Cell Dyn Ruby

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Background: The goal of evaluation was to estimate the working of new haematological analyzer CELL-DYN Ruby. The aim of measurements of parameters WBC, RBC, HGB, HCT, MCV, MCH, and PLT

as recommended by CLSI was to determine the "Long-term imprecision" and "bias" and provide an assessment of the acceptability of a new analyzer.

Materials and methods: We have used commercial controls to evaluate „Long-term imprecision'' and determined standard deviation and coefficient of variation through statistical analysis of the results. To compare two methods the testing was performed on the extinguishers Cell Dyn 1700 and Cell Dyn Ruby within three hours. Every day the testing of series 8-10 samples was performed in the sequence 1,2,3,4,5,6,7,8 and duplicates in the sequence 8,7,6,5,4,3,2,1 ever. Using statistical analysis, we have compared the comparability of methods and calculated power connections with a correlation factor.

Results: In estimating analytical variability, we have determined the maximum coefficient of variation of platelets from 2% to 5%. In assessing the comparison of methods Cell Dyn 1700 and Cell Dyn Ruby, we have found out that both methods are comparable. Correlation coefficients for WBC, RBC, HGB, HCT and PLT were between 0.9773 and 0.9976, for MCV and MCH they were between 0.9476 and 0.9988.

Conclusions: Based on our results, we can conclude that the haematological analyzer Cell Dyn Ruby is suitable for determination of complete blood counts in the hemostasiological laboratory.

P08-10

Overestimation of albumin (bromcresol green method): influence of acute-phase serum globulins

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Background: As the most specific method for albumin measurement (immunonephelometry) is expensive, most laboratories use dye-binding methods, being the two most common the bromcresol green (AlbBCG) and bromcresol purple (AlbBCP). AlbBCG and AlbBCP often yield discordant results, with a mean difference about 5 g/L. The objective of this study was to evaluate the influence of serum globulin on discrepancies albumin results measuring by BCG and BCP methods.

Material and methods: Concentrations of serum albumin, globulins (alpha1-, alpha2-, beta and gamma) and C-Reactive Protein (CRP) were analyzed in 75 serum specimens by BCG and BCP and capillary zone electrophoresis (CZE) and nephelometry respectively. Comparisons were performed using Student t-test for paired data, Pearson correlation and Bland-Altman plot, using MedCalc software. Significance was set at $P < 0.05$.

Results: Correlation between AlbBCP-AlbBCG was 0.976 ($P < 0.01$) but the mean difference was 4.53g/L. Between AlbBCG- AlbCZE mean difference was 3.54g/L. AlbBCP is in good agreement AlbCZE estimation with a mean difference of 0.97g/L. Differences between AlbBCG and AlbBCP become more evident with lower albumin concentration. AlbBCG assay bias shown a good correlation with alpha1-globulin concentrations ($r = 0.746$; $P < 0.01$); a moderate ($r = 0.633$; $P < 0.01$) and weak correlation ($r = 0.575$; $P < 0.01$) was observed with CRP and alpha2-globulin, respectively; finally, we found no correlation with beta-globulin ($r = 0.151$; $P = 0.228$), and a poor correlation with gamma-globulin ($r = -0.272$; $P = 0.02$).

Conclusion: BCG method is not absolutely specific for albumin. Serum acute phase globulins (alpha1 and alpha2) contribute to the overestimation of albumin concentration by BCG assay, with the greatest effects observed for alpha1-globulin.

P08-11

Comparison of sodium values between emergency and routine biochemical laboratory

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Introduction: In our hospital, the determination of ions is performed by indirect potentiometry: Dimension RxL-Max (Siemens) at the emergency laboratory and Advia2400(Siemens) in the routine laboratory. Suspecting a downward trend in the determination of sodium(Na) in the ER laboratory, we process the same samples on both analyzers, using the Advia2400 as a reference method.

Material and methods: On 3 different days, 158 serum samples were processed in parallel in both analyzers. Statistical analysis of the results was performed using MedCalc® software, using the Kolmogorov-Smirnov test, Pearson correlation and linear regression. Statistical significance was set at $P<0.05$.

Results: The overall correlation between the two methods was good, using Pearson's coefficient of correlation tes, $r = 0.894$ (95 CI% = 0.858-0.922) ($P < 0.01$).We calculated a regression equation to transform the results of Dimension in Advia values:y (Advia) = 9.6773 + 0.9356x (Dimension). Samples were classified into 2 groups according Advia results:hyponatremia (< 135 mEq/L) and not hyponatremia(> 135 mEq/L). After this, the hyponatremic cases(N = 12) were subdivided into three groups according to the degree of discrepancy between methods: 25% mild (difference ± 1 mEq/L), 42% moderate(± 2 mEq/L) and 33% severe (± 3 mEq/L). We obtained a 13% false negatives (Advia Na < 135 mEq/L and normal in Dimension > 135 mEq/L) and 9% false positives (Advia normal and low in Dimension). Applying the previously calculated regression equation to convert the Dimension results on Advia ones, these percentages were changed to a 26.1% of false negatives and 3% of false positives.

Conclusions: Contrary to the initial suspicion, we found more false negatives than false positives, 13% and 8.9% respectively. So, the application of the linear regression line, while reducing the false positive rate (3%), doubles the number of false negatives (26.1%). The linear regression increased by 7.1% the total number of differing values, there by not suggest their application in clinical practice.

P08-12

Analytical evaluation of the new random access bench top analyser RX daytona plus

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Background: The availability of fully automated clinical chemistry analyzers capable of facilitating quick and precise analysis is beneficial in the process of patient diagnosis. This is relevant to those assays used, for example, in the diagnosis of a cardiac event. This study reports the evaluation of a newly developed fully automated bench top system, the RX daytona plus. This is demonstrated with the evaluation of an aspartate aminotransferase (AST) assay. Elevated levels of AST can signal myocardial infarction.

Materials and methods: On-board and calibration stabilities were tested by storing the reagents uncapped on the analyzer for 28 days. Assay precision was assessed by testing serum samples at defined levels, 2 replicates twice a day for 20 days. Correlation studies were conducted using another commercially available clinical chemistry analyzer.

Results: The AST reagent presents an on-board stability and calibration frequency of 28 days. The assay was found to have a Limit of Blank of 0.5 U/L and be linear up to 927 U/L. The within-run and total precision for three different concentration

levels typically had %CVs of ≤ 3.5%. In the correlation study 60 serum patient samples were tested and the following linear regression equation was achieved *vs*. analyser A: Y = 1.03x + 4.64; r = 0.999.

Conclusions: The results from this evaluation of the AST assay on the new bench top RX daytona plus analyzer indicate optimal analytical performance and overall the system represents a useful cost-effective analytical tool for the clinical chemistry laboratory.

P08-13

The performance of Cobas c311 in stat laboratory

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Background: The objective of this study was to perform the analytical evaluation of the biochemistry analyzer Roche Cobas c311 and compare TAT of emergency tests with biochemistry analyzer Olympus AU 480. Short validation of the Cobas c311 was performed according the guidelines of the European Committee for Laboratory standards.

Materials and methods: The tested analytes in this study were : glucose, urea, creatinine, total and direct bilirubin, alpha-amylase, alkaline phosphatase, aspartate aminotransferase, alanine aminotransferase, lactat dehidrogenase, gama-glutamyltransferase, creatine kinase , lipase, C-reactive protein, calcium, sodium, potassium and chloride. Research included determination of within-run and between–run imprecision, inaccuracy, calculated total error and method comparison with Olympus AU 480. In addition, we compared tournaround time (TAT).

Results: Coefficients of variation for within-run imprecision for all tested analytes were below 5%. Coefficients of variation for between-day imprecision were compared to quality specifications. CVs for calcium, sodium and chloride are higher than recommended. Results for total inaccuracy (bias) revealed that urea, calcium, sodium, potassium and chloride have higher total inaccuracy than recommended. In addition, calcium, sodium and chloride are not in accordance with recommended specification when comparing total error with quality recommendations (results are higher than recommended values). Coefficients of correlation for majority of analytes are r > 0.98 except for calcium (r = 0.884), sodium (r = 0.837) and chloride (r = 0.881). TAT for the Cobas c311 was on the average 11% longer then Olympus 480.

Conclusion: Cobas c311 biochemistry analyzer is acceptable for emergency purposes, however the overall TAT is slightly longer than recommended.

P08-14

Comparison of Emerald and CELL-DYN 1800 for white blood cells and granulocytes in oncology patients

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Background: The absolute number of the white blood cells (WBC) and neutrophil granulocytes (GRAN) in peripheral blood of patients undergoing chemotherapy or radiotherapy is an important indicator of their immunodeficiency. Capillary blood sampling from finger is an option in case of frequent blood controls and damaged blood vessels. Hematology analyzers Abbot CELL-DYN Emerald and CELL-DYN 1800 are good choices because of the small sample volume needed for analyses (9.8 and 30 uL respectively). The aim of the study was to compare the performance of

CELL-DYN Emerald and CELL-DYN 1800 for WBC and GRAN measurement.

Materials and methods: Capillary blood samples of 193 patients were analyzed on CELL-DYN Emerald and CELL-DYN 1800 for WBC and GRAN. Blood was collected from finger using BD Microtainer® tube with K2-EDTA anticoagulant. Passing-Bablok regression was used to compare results from two analyzers.

Results: Correlation coefficient for both parameters is r = 0.98, P < 0.001. Intercept for WBC is 0.31, 95%CI 0.15-0.48 and slope is 0.94, 95%CI 0.92-0.97. For GRAN intercept is 0.07, 95%CI -0.01-0.13 and slope is 0.94, 95%CI 0.92-0.96. Results indicated small constant and proportional error for WBC and small proportional error for GRAN.

Conclusions: Despite the small constant and proportional error for WBC and small proportional error for GRAN, both analyzers can be used to access WBC and GRAN count in capillary blood samples. CELL-DYN Emerald needs very small sample volume for analysis and thus it is very useful for capillary blood samples from oncology patients.

P08-15

Body fluids automated cell count: a comparison study between Sysmex XE-5000 and Siemens ADVIA 2120i

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Introduction: Body fluid cytology, including total cell count and differentiation, continues to be a time-consuming task in modern clinical laboratories. The evolution of hematological analyzers, with new approaches to the counting methodology, has brought new possibilities in biological fluids cytology. The aim of this study is to assess whether Sysmex XE-5000 (Sysmex Corporation, Kobe, Japan) and Siemens ADVIA 2120i (Siemens Healthcare Diagnostics Inc., New York, USA) hematology analyzers can replace the manual reference method in daily clinical onset.

Materials and methods: One hundred thirty three (N = 133) non-CSF body fluid samples were prospectively studied, including 74 ascitic fluids (55.6%), 49 pleural fluids (36.8%), 3 pericardial fluids (2.3%), 4 synovial fluids (3.0%) and 3 drainage liquids (2.3%). Each fluid was analyzed by two experienced cytologists and the two above mentioned hematology analyzers.

Results and conclusions: Our results indicate that in serous fluids – ascitic, pleural and pericardial – is possible to use either Sysmex XE-5000 or Siemens ADVIA 2120i to perform total cell count. However, cell differentiation using these approaches lacks both enough sensibility and specificity and therefore they should not be used. Finally, the automated analysis did not provide accurate results for other body fluids.

P09 – Haematology 1

P09-01

Verification of CD34+ stem cell analysis according to ISHAGE protocol on Beckton Dickinson FACSCanto

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Background: Implementation of new analytical equipment into routine work requires verification procedure. We have verified flow cytometer Beckton Dickinson FACSCanto II for ISHAGE protocol (Sutherland et al, 1996, J Hematotherapy, 5:213-226) stem cell (CD34+) analysis according to CLSI EP-A2-User Verification of Performance for Precision and Trueness; Approved Guideline-2nd ed.,Vol.25,No.17.,2005. in concordance with ISO 15189.