Nurses' Responsibility For Independent Practice In Providing Nursing Care; A Study Of Law Number 17 Of 2023 Concerning Health

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Abstract.

Health is a fundamental right of every person in the world. To be healthy, health services are necessary. These health services are provided by health workers, one of which is nurses. The practice allows nurses to work independently outside hospitals and/or community health centres. This study aims to analyse the regulations and responsibilities of nurses who practise independently in providing nursing care as part of health services, as stipulated in Law Number 17 of 2023 concerning Health. The method used in this paper is a normative juridical method with a conceptual and regulatory approach. The data used is secondary data consisting of primary legal materials, secondary legal materials, and tertiary legal materials. The analysis was conducted qualitatively. The research findings show that Law Number 17 of 2023 concerning Health regulates legal relationships in the provision of health services differently from the old regulations. Within this framework, the analysis shows that it is necessary to provide clear regulations on nursing care activities carried out by independent nurses, particularly those related to the responsibilities that independent nurses must fulfil.

Keywords: *Nurses; Nursing Care;Independent Practice;Legal Relationships and Health Services.*

I. INTRODUCTION

The existence of nurses in this world has been known since ancient times, even before the Common Era, although there was no formal education that someone had to undergo to be qualified to provide nursing care. There is even a story about the Zuni tribe, who believed that if a baby girl was born with the placenta covering her face, she would be marked or predicted to be among those capable of providing nursing care when she grew up [1] [2]. Furthermore, due to the lack of formal education on nursing care, nursing skills are passed down from generation to generation. In nursing practice, nurses and midwives work side by side [3] [4].Currently, nursing personnel are one of the groups of health workers recognised and acknowledged in Law Number 17 of 2023 concerning Health [5]. In Law Number 17 of 2023 concerning Health, nursing personnel are placed on an equal footing with medical personnel as part of the human resources of Health [6] [7]. This recognition of equality has existed since the enactment of Law Number 36 of 2014 concerning Health Workers [8]. before a judicial review is conducted by the Constitutional Court [9]. Even looking back, the mention of medical science and nursing science together in a single sentence linked to their respective expertise and authority has existed since the enactment of Law No. 23 of 1992 on Health [10]. Law Number 17 of 2023 concerning Health, in addition to revoking Law Number 36 of 2014 concerning Health Workers, also revokes Law Number 38 of 2014 concerning Nursing [11]. However, Article 453 of Law Number 17 of 2023 concerning Health states that "At the time this Law [12] effective immediately, all laws and regulations that are implementing regulations of ... Law Number 38 of 2014 concerning Nursing ... are declared to remain in force as long as they do not conflict with the provisions of this Law."

[13]Furthermore, as an implementation of Law Number 17 of 2023 concerning Health, Government Regulation Number 28 of 2024 concerning the Implementation Regulations of Law Number 17 of 2023 concerning Health has been issued. In the provisions of Article 1169 of Government Regulation Number 28 of 2024 concerning the Implementation Regulations of Law Number 17 of 2023 concerning Health, it is stated that ‘When this Government Regulation comes into force, all regulations that are implementing regulations of ... shall remain in force as long as they do not conflict with the provisions of this Government Regulation.’ Law Number 36 of 2014 concerning Nursing does not have a government regulation implementing it; however, it has a Minister of Health Regulation implementing it. This regulation is Minister

of Health Regulation Number 26 of 2019 concerning the Implementation Regulation of Law Number 38 of 2014 concerning Nursing. Thus, based on the provisions of Article 453 of Law Number 17 of 2023 concerning Health, Minister of Health Regulation Number 26 of 2019 concerning the Implementing Regulation of Law Number 38 of 2014 concerning Nursing remains in force as long as it does not conflict with Law Number 17 of 2023 concerning Health.With regard to independent nursing practice, the relevant provisions can be found in Minister of Health Regulation No. 26 of 2019 concerning the Implementation Regulations of Law No. 38 of 2014 concerning Nursing [14] [15]. As part of the implementing regulations of Law No. 17 of 2023 on Health, Minister of Health Regulation No. 26 of 2019 on the Implementing Regulations of Law No. 38 of 2014 on Nursing has never been revoked, and therefore can be considered 'still' in force.

Minister of Health Regulation No. 26 of 2019 concerning the Implementation Regulations of Law No. 38 of 2014 concerning Nursing regulates matters relating to [16] [17]: "a. types of nurses; b. licensing; c. implementation of nursing practice; d. independent nursing practice; e. health/nursing service needs in a region; and f. guidance and supervision."Furthermore, Article 15 (1) of Minister of Health Regulation No. 26 of 2019 concerning the Implementation Regulations of Law No. 38 of 2014 concerning Nursing also states that 'Nurses shall carry out Nursing Practice in Health Care Facilities and/or other places in accordance with their target clients.' As an explanation of the provisions of Article 15 paragraph (1) of Minister of Health Regulation No. 26 of 2019 concerning the Implementation Regulations of Law No. 38 of 2014 concerning Nursing, it is stated that: Health Care Facilities that can be used to carry out nursing practice in Health Care Facilities are [18] [19] a. independent nursing practice; b. clinic; c. community health centre; and/or d. hospital; and what is referred to as 'other places as agreed with the Client' [20], The targets include clients' homes, nursing homes, orphanages, social institutions, companies, schools, and other places in accordance with the provisions of the law [21]; [22].With regard to Health Care Facilities, Law Number 17 of 2023 concerning Health explains that there are two types of health care facilities, namely: First-level health care facilities that provide primary health care [23]; and Advanced Healthcare Facilities that provide advanced healthcare services, including specialist and/or subspecialist services [24] [1]. The following explanation states that "Primary Health Care Facilities can take the form of: a. Community Health Centres (Puskesmas); b. Primary Clinics; and c. Independent Medical or Health Practitioner Practices [25]"; and "Advanced health care facilities may include: a. Hospitals; b. Major clinics; c. Health centres; and d. Independent medical or health practitioner practices [26]" Still in relation to health service facilities, Minister of Health Regulation No. 34 of 2022 concerning the Accreditation of Community Health Centres, Clinics, Health Laboratories, Blood Transfusion Units, Independent Doctor Practices, and Independent Dental Practices clearly seems to limit health service facilities to only those places mentioned in the Minister of Health Regulation [27] [28].

From the description above, it can be seen that there has been a lack of harmony in the regulation of independent nursing practice. These differences in regulation will indirectly affect the nature of legal responsibility in the legal relationship that occurs in the provision of nursing care by nurses who carry it out in the form of independent practice. Because the current law is Law Number 17 of 2023 concerning Health, all norms governing independent nursing practice must depart from and be in accordance with the concept of independent nursing practice as regulated in Law Number 17 of 2023 concerning Health, including the legal responsibility arising from these legal relationships. Therefore, the researcher conducted this study entitled 'The Responsibility of Independent Nursing Practice in the Provision of Nursing Care: A Study of Law Number 17 of 2023 on Health.'For the past twenty years, studies have been conducted on how to properly conserve acrylic painted canvases [2, 3], as they are more prone to attract dirt and require specific cleaning processes, different from oil paintings.

II. METHODS

The analytical techniques selected to conduct this investigation are based on the suitability for characterizing art materials. Therefore, the instrument parameters must meet conservation standards regarding sampling, where minimum or no samples should be taken from artworks. Py-GC/MS offers broad insight on chemical composition, as the sample components are fully identified based on their molecular

mass after being separated by chromatography. A rapid differentiation of medium acrylic polymer is provided by FTIR technique, based on the identification of organic functions of the monomer main chain. Raman spectroscopy was also employed as a complimentary technique to FTIR. The aforementioned techniques do not provide conclusive information on inorganic pigments or fillers. For that reason, SEM-EDS was used to evaluate pigment and filler presence on each sample. Microscopy not only indicates the distribution of pigments but also their particle size, while EDS provides qualitative elemental analysis.

Py-GC/MS

The instrument used was a PY-3030D microfurnace pyrolyzer (Frontier Lab) mounted over a Shimadzu Co. GCMS-QP5000 equipped with SGE BPX5 column 5% phenyl polysilphenylene-siloxane (30m x 0.25µm x 0.25mm). Pyrolysis was performed at 610°C for 0.20min with Py-GC interface at 300°C and GC-MS interface at 280°C. The GC oven temperature was 40°C (held for 2min.) with a 10°C·min^{-1} rate and final temperature of 350°C (2 min). The MS split was 1:150 and the m/z was scanned from 40 to 600µm in electron impact ionization mode (EI+, 70eV). Spectra were compared to NIST library standards and the works of Tsuge *et al.* [12] and Tom Learner [1].

FTIR

Infrared spectra were collected on a Varian 660IR model coupled with a VeeMax II reflectance accessory (Pike Technologies), from 4000 to 400cm^{-1} and for 100 scans with a resolution of 1cm^{-1}, reflectance angle at 51°. Kubelka-Munk (K-M) function was used.

Raman

The spectrometer used was a Cora Family 5500 (Anton Parr) equipped with 785nm excitation laser, covering the 100 to 2300cm^{-1} range with resolution of 12cm^{-1} and laser power of 450mW. Vibrational spectra, FTIR and Raman, were compared with IRUG (Infrared and Raman Users Group) database.

SEM-EDS

Microscopical analyses were performed on a TM3000 (Hitachi Co.) scanning electron microscope coupled with a Quantax70 energy dispersive X-ray fluorescence spectrometer (Bruker Nano GmbH). Images and elemental analyses were obtained at 15kV and working distance 5.1mm.

III. RESULT AND DISCUSSION

Acrylic paints are a complex formulation that includes numerous ingredients. The final product must meet commercial (shelf life, material costs, environmental and health safety) and artistic (durability, color and film stability, drying rate) demands. Therefore, the paint tube might contain the acrylic binder, pigment or dye, wetting and dispersing agents, thickeners, biocides and defoamers [13].FTIR and Raman spectroscopies were used to identify binding media, SEM-EDS was used to identify inorganic pigments and fillers, Py-GC/MS was used to identify minor binders and plasticizers. Results are presented in Table 1.

Binding media

Brazilian paints present styrene (S) as the major component. Differently, the binding media of imported paints, namely from USA and Great Britain, is a copolymer of metyhl methacrylate (MMA). Nevertheless, the newly released *professional grade* Brazilian paint (Corfix Arts) presents poly(styrene-co-methacrylate), P(S/MA), as binding media.The use of MMA as binding media yields a paint film which is stable, resistant to hydrolysis and transparent to UV. In general, substitution of methacrylate copolymers for polystyrene is due to cost issues [2].Monomers of each paint sample are identified by infrared and Raman spectroscopies. Figures 1 and 2 show, respectively, FTIR spectra of phthalo blue (BPc) and Prussian blue (BPr) samples. Styrene presence is characterized by infrared peaks at 3087-3018 cm^{-1} for aromatic C-H stretching (ν), 1428cm^{-1} for ring breathing and 1612cm^{-1} for C=C stretching. Raman spectra for Corfix and Corfix Arts paints are presented in figure 3. Characteristic peaks 1076cm^{-1} for aromatic ring stretching and 1686cm^{-1} for aromatic νC-H are observed. The presence of MA in Corfix Arts sample is indicated by infrared peaks 1742cm^{-1} (νC=O), 1229cm^{-1} (νC-O) and 1427cm^{-1} (νCH_3) and Raman peaks 1096cm^{-1} (νC-O-C) and 1686cm^{-1} (νC=O).

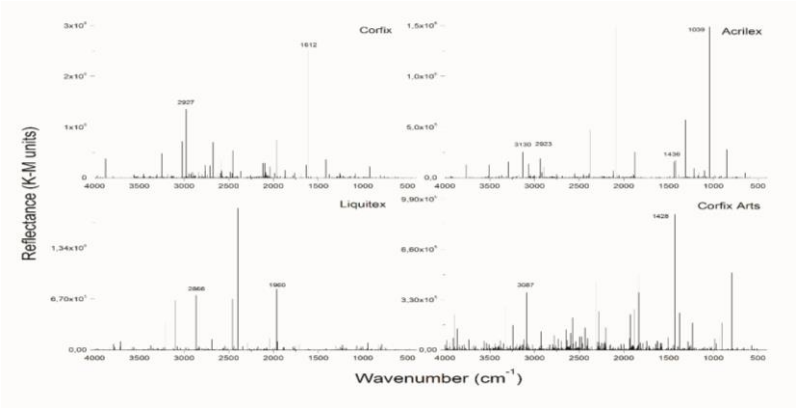

Fig 1. FTIR spectra of phthalo blue (BPc) paints: Acrilex, Corfix, Corfix Arts (BRA) and Liquitex (USA)

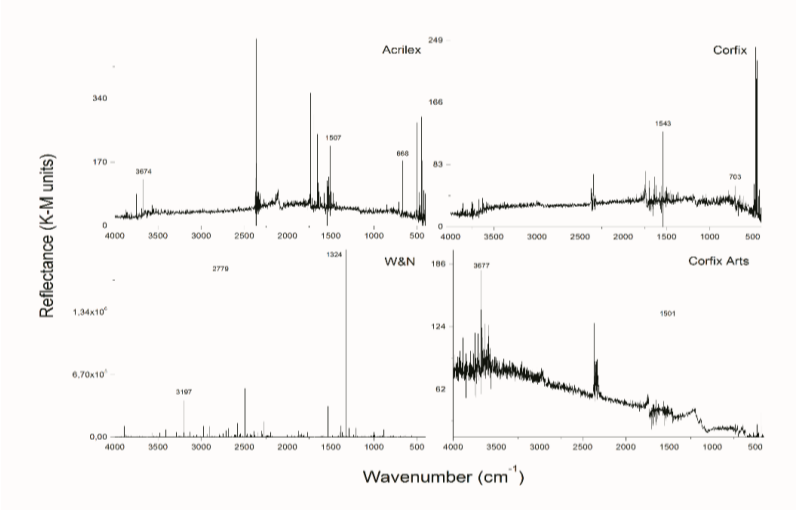

Fig 2. FTIR spectra of Prussian blue (BPr) paints: Acrilex, Corfix, Corfix Arts (BRA) and Winsor & Newton (GBR)

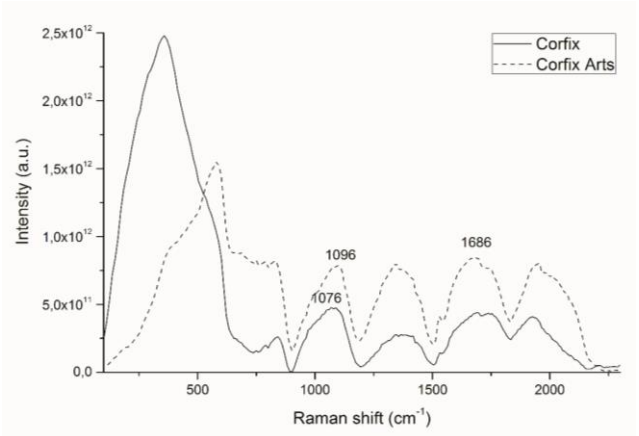

Fig 3. Raman spectra of phthalo blue (BPc) Corfix and Corfix Arts (BRA)

The binding media present in phthalo acrylic paints are confirmed by Py-GC/MS technique. Figures 4 and 5 present the chromatogram of phthalo blue (BPc) and Prussian blue (BPr) samples. Peaks for PS are indicated by presence of styrene (S), alpha-methylstyrene (αS), styrene dimer (SS and D2) and trimer (SSS). Peaks for P(S/MA) are confirmed by methacrylate (M), styrene (S), a hybrid dimer (SM') and trimer (SSM and SMS). Chromatogram of P(S/MMA) differs mainly for the MMA monomer identification at 5 min in Winsor & Newton BPr sample. Characteristic peaks of P(nBA/MMA) sample are described elsewhere [1].

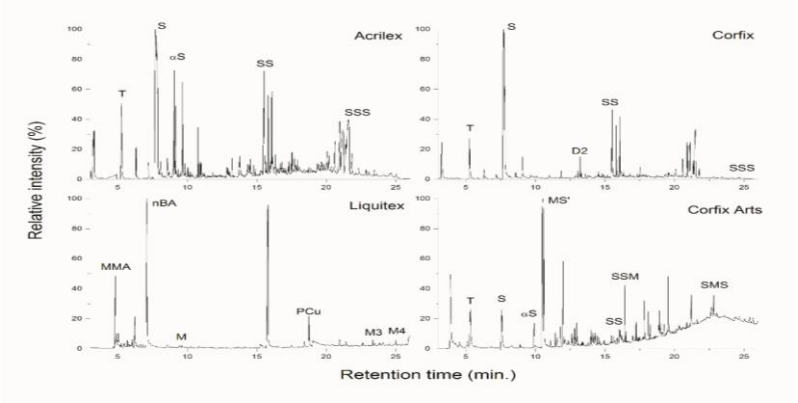

Fig 4. Py-GC/MS spectra of phthalo blue (BPc) paints: Acrilex, Corfix, Corfix Arts (BRA) and Liquitex (USA)

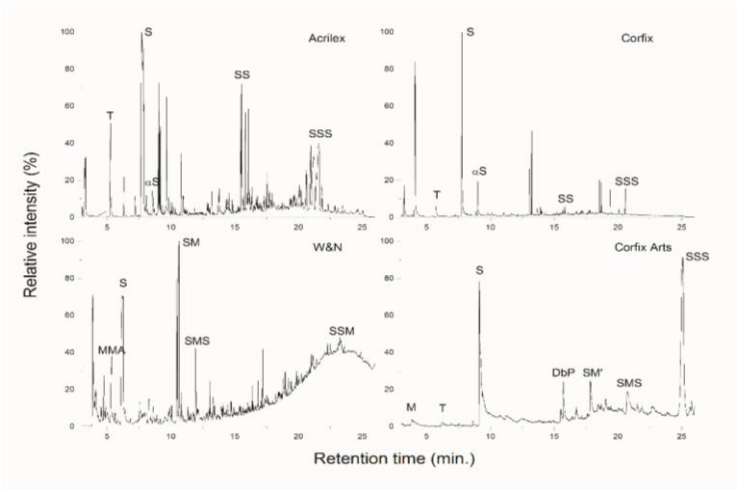

Fig 5. Py-GC/MS spectra of Prussian blue (BPr) paints: Acrilex, Corfix, Corfix Arts (BRA) and Winsor & Newton (GBR)

Pigments and extenders

Figures 6 and 7 present SEM images (micrographs) of BPc and BPr samples, respectively. Results indicate that Corfix Arts is the only to resemble the composition of imported materials. Images of samples Acrilex and Corfix, for both paints, BPc and BPr, present lower ratio of particles either pigments or extenders.

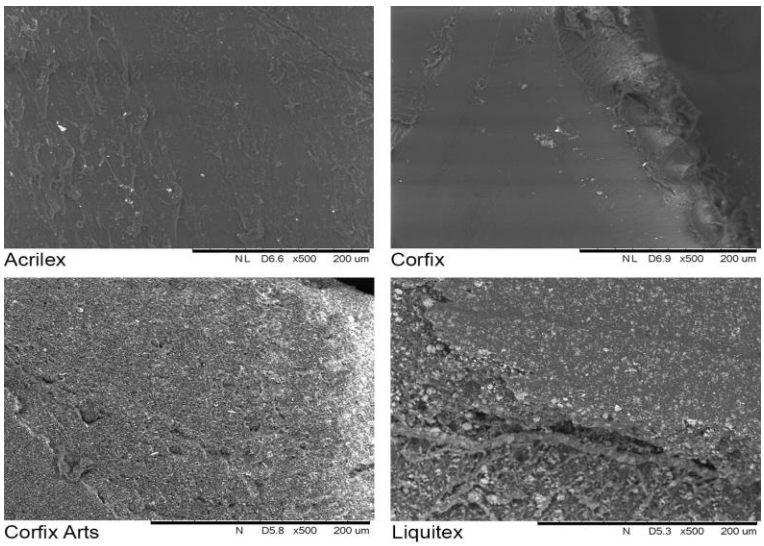

Fig 6. Micrographs (200µm) of phthalo blue (BPc) paints: Acrilex, Corfix, Corfix Arts (BRA) and Liquitex (USA)

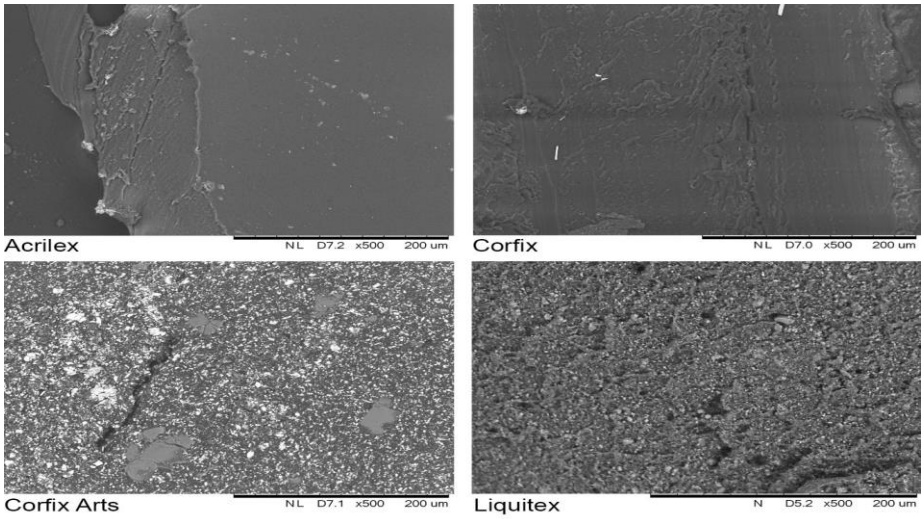

Fig 7. Micrographs (200µm) of Prussian blue (BPr) paints: Acrilex, Corfix, Corfix Arts (BRA) and Winsor & Newton (GBR)

Phthalocyanine blue ($C_{32}H_{16}CuN_8$) is indicated by EDS (Table 1) by presence of copper in all four BPc samples. Prussian blue ($C_{18}Fe_7N_{18}$) is detected in BPr samples Acrilex, Corfix Arts and Winsor & Newton. Sample Corfix of Prussian blue is composed of copper. Phthalocyanine blue pigment is also detected by Py-GC/MS in Liquitex sample (Fig. 4).EDS elemental analysis (Table 1, Figs. 8 and 9) indicate that all samples present kaolinite ($Al_2Si_2O_5(OH)_4$) as filler, except for sample Bpr Acrilex, which contains talc ($Mg_3Si_4O_{10}(OH)_2$). FTIR analyses indicate the presence of these fillers with peaks at 1039cm^{-1} (νSi-O), 3750-3500cm^{-1} (νO-H) and 789-754cm^{-1} (νAl-Si-O).

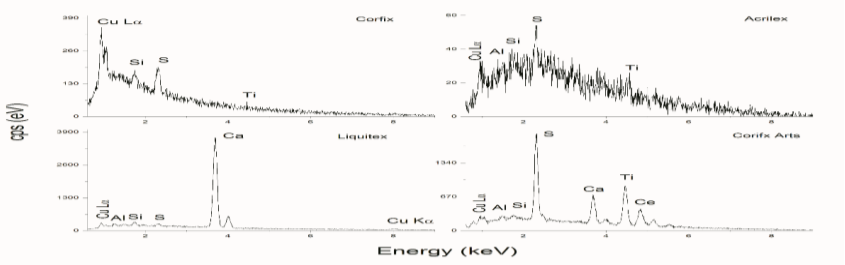

Fig 8. EDS spectra of phthalo blue (BPc) paints: Acrilex Corfix, Corfix Arts (BRA) and Liquitex (USA)

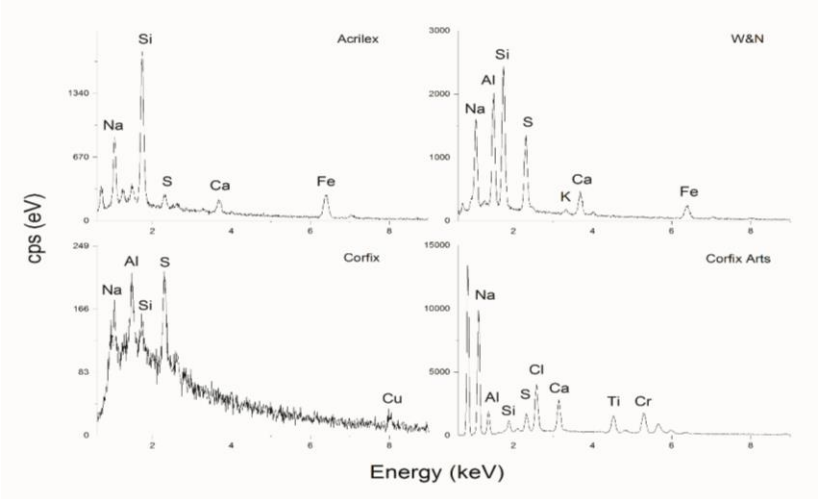

Fig 9. EDS spectra of Prussian blue (BPr) paints: Acrilex Corfix, Corfix Arts (BRA) and Winsor & Newton (GBR)

Corfix Arts samples of both BPc and BPr paint present TiO_2 and cerium (Ce). Titanium dioxide is often used to moderate hue and saturation. Rare earth metals, especially Ce, are known to enhance paint properties such as light fastness, chemical resistance and drying time [14].

IV. CONCLUSION

Chemical composition of artist paints commercialized in Brazil varies greatly. Therefore, a multi-component characterization requires multi-technique analyses. Advantages of each technique (FTIR, Raman, Py-GC/MS and SEM-EDS) were pointed out to present a broader knowledge of the paints used by Brazilian contemporary artists.FTIR and Raman are, complimentary, able to rapidly identify the main binders, while Py-GC/MS provides further information of copolymers, even in minor concentration levels. SEM-EDS successfully identifies pigments and extenders.Brazilian paints of *student* grade are composed of PS binding media and low pigment ratio, whereas the *professional* grade paint is composed of P(S/MA) binding media, higher pigment ratio and extenders such as TiO_2 and Ce. Conservation concerns over the ageing processes of these paints will be addressed in future studies.In conclusion, this initial study provides conservators, artists and conservation scientists information on the composition of artist paints manufactured in Brazil.

V. ACKNOWLEDGMENTS

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