The pH of Common Soaps and Cleansers in Nigeria and Implications for Skin Health and Inflammatory Dermatoses

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ABSTRACT

Background: The pH of skin cleansers is important to skin health, particularly for those with sensitive or dry skin or inflammatory dermatoses. Soaps, which are alkaline, can cause skin dryness and barrier disruption, while syndets, typically acidic or neutral, are less irritating. The pH of common soaps and cleansers used in Nigeria is undocumented.

Objectives: This study assessed the pH and costs of various skin cleansers commonly used by Dermatology patients in Lagos and Ibadan, Nigeria.

Methods: Sixty commercial skin cleansers were selected and purchased for pH analysis based on their popularity among patients attending dermatology clinics in Lagos and Ibadan. A 10% emulsion of each product was created using distilled water. The pH of each sample was recorded at room temperature (25°C) using pH test strips and a calibrated digital water pH meter. The manufacturing country and market cost of each cleanser were also documented.

Results: Of the 60 cleansers - 49 bars and 11 liquid cleansers, 45 (75%) had an alkaline pH of between 9.0 and 11.1, while 15 (25%) had an acidic pH of between 5.1 and 6.8. Thirty-five cleansers (58.3%) were manufactured locally and were all alkaline soaps, while 25 (41.7%) were imported, and the majority (15; 60%) were acidic or pH-balanced syndets. The average cost of imported cleansers was 7 times higher than that of Nigerian-made soaps.

Conclusion: The predominance of alkaline skin cleansers among Nigerian dermatology patients may have negative implications for skin health, especially for those with inflammatory skin conditions or sensitive skin. There is a need to advocate for using pH-balanced cleansers and their local production to improve affordability.

Keywords: pH, Soaps, Cleansers, Skin health, Inflammatory Dermatoses, Nigeria

Le pH des Savons et Nettoyants Courants au Nigéria et leur Implication dans la santé de la Peau et des Dermatoses Inflammatoires

Contexte: Le pH des nettoyants cutanés est important pour la santé de la peau, en particulier pour les personnes ayant une peau sensible ou sèche ou des dermatoses inflammatoires. Les savons, qui sont alcalins, peuvent entraîner une sécheresse cutanée et une altération de la barrière cutanée, tandis que les syndets, généralement acides ou neutres, sont moins irritants. Le pH des savons et nettoyants courants utilisés au Nigéria n'est pas documenté.

Objectifs: Cette étude a évalué le pH et les coûts de divers nettoyants pour la peau couramment utilisés par les patients en dermatologie à Lagos et Ibadan, au Nigéria.

Méthodes: Soixante nettoyants commerciaux pour la peau ont été sélectionnés et achetés pour une analyse du pH en fonction de leur popularité auprès des patients fréquentant les cliniques de dermatologie à Lagos et

Ibadan. Une émulsion à 10 % de chaque produit a été créée à l'aide d'eau distillée. Le pH de chaque échantillon a été enregistré à température ambiante (25 °C) à l'aide de bandelettes de test de pH et d'un pH-mètre d'eau numérique calibré. Le pays de fabrication et le coût du marché de chaque nettoyant ont également été documentés.

Résultats: Sur les 60 nettoyants – 49 barres et 11 nettoyants liquides, 45 (75 %) avaient un pH alcalin compris entre 9,0 et 11,1, tandis que 15 (25 %) avaient un pH acide compris entre 5,1 et 6,8. Trente-cinq nettoyants (58,3 %) ont été fabriqués localement et étaient tous des savons alcalins, tandis que 25 (41,7 %) ont été importés et la majorité (15 ; 60 %) étaient des syndets acides ou à pH équilibré. Le coût moyen des nettoyants importés était 7 fois plus élevé que celui des savons fabriqués au Nigéria.

Conclusion: La prédominance des nettoyants alcalins au Nigéria peut avoir des implications négatives pour la santé de la peau, particulièrement pour les patients souffrant de dermatoses inflammatoires ou sensibles. Il est nécessaire de plaider en faveur de l'utilisation de nettoyants ayant un pH équilibré et de leur production locale pour en améliorer l'accessibilité.

Mots clés: pH, Savons, Nettoyants, la santé de la peau, Dermatoses Inflammatoires, Nigéria

INTRODUCTION

A **skin cleanser** is designed to clean the skin by removing dirt, oil, sweat, certain microorganisms, and other impurities by breaking them down on the skin's surface and allowing them to be rinsed away with water.[1-3] Skin cleansers come in various forms, including gels, creams, lotions, foams, micellar water, and bar soap.[1-3] While soap is a skin cleanser, not all skin cleansers are chemically soap and vary in chemical composition and action.[1,3] Soap, produced through the saponification of natural fats or oils with an alkali, typically has a high (alkaline) pH.[2,3] Soap molecules have a hydrophilic and hydrophobic component, allowing them to dissolve and remove dirt, grease, and oils when mixed with water through emulsification.[1-3] This characteristic makes it effective for personal hygiene, household, and industrial cleaning, for which it has been widely used for centuries.[2-4] However, its alkaline nature makes it drying and irritating, especially for people with sensitive skin or conditions like atopic dermatitis, seborrhoeic dermatitis, acne vulgaris, rosacea or psoriasis.[3-5] Recently, there has been increasing attention to the negative effect of soap on specific inflammatory dermatoses, mainly due to its impact on the skin's moisturization, transepidermal water loss and pH.[4,5]

The skin's outermost layer, the stratum corneum, is a barrier against pathogens, pollutants, UV radiation, and dehydration.[3,5,6] This function is supported by the natural oils, ceramides, and natural moisturizing factors produced by the skin.[3] Additionally, a hydrolipid film, an acidic mixture of sweat and sebum on the skin surface, commonly known as the acid mantle, plays a significant role in maintaining skin barrier function.[5,6] Due to the acid mantle, the normal pH of normal stratum corneum (SC) is acidic and ranges between 4.5 and 6.0.[5,6] The acidic environment helps maintain barrier integrity, promotes the growth of normal microflora, and prevents the overgrowth of pathogenic microorganisms.[5,6] It also regulates the pH-dependent enzymatic processes of stratum corneum formation and turnover. It stabilizes the skin's barrier function by minimizing trans-epidermal water loss and preserving moisture and lipids in the stratum corneum.[5,7,8]

Alkaline soaps or cleansers, like traditional soaps, usually have a pH of between 9 and 11, which can disrupt this balance and function.[2-4,9] They can temporarily alter the skin's normal pH and deplete skin lipids, which may lead to dryness, irritation, pruritus, and the exacerbation of pre-existing skin conditions, particularly inflammatory dermatoses.[3,4,6,7]

In contrast, pH-balanced skin cleansers, usually a class of synthetic detergents (syndets), are formulated to maintain the skin surface's natural acidity.[2,3,7,8,10] Syndets are chemically synthesized from fats, petroleum, or oil-based products, and alkali through a combination of chemical processes known as sulfonation, ethoxylation, and

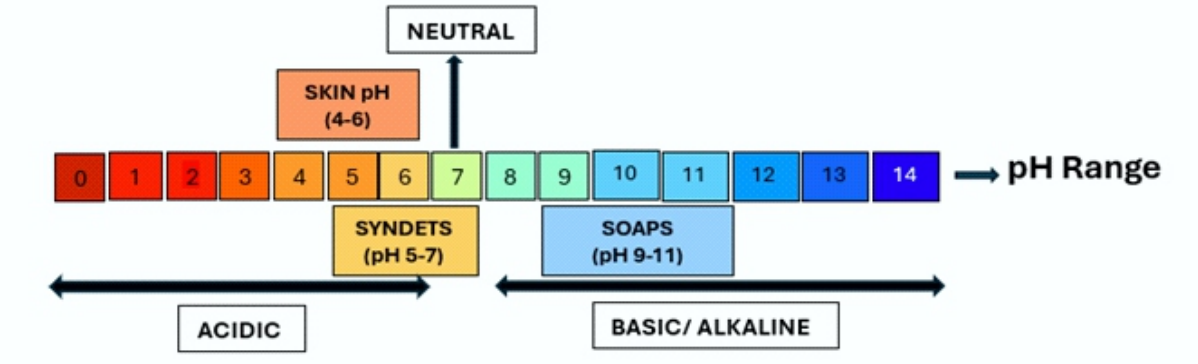

Figure 1: The pH range of normal skin, soaps and syndets

esterification but not saponification.[2,3] They tend to be acidic or neutral and typically have a pH between 5.0 and 7.0, close to the stratum corneum's physiological pH, which helps preserve skin barrier integrity and hydration (See Figure 1).[2-4,10] The efficacy and safety of these cleansers depend not only on the pH but also on their composition.[1,7]

Many pH-balanced cleansers contain one or more syndet molecules, like Cocamidopropyl betaine or sodium cocoyl isethionate, alongside other ingredients like esters, oils, and moisturizing agents.[1,3,10] Figure 2 lists the major soap and syndet molecules used in skin cleansers.

Skin Cleansing Agents

Alkaline Cleansing Agents Commonly Used in Soaps

1. Sodium Hydroxide (pH 14)
2. Potassium Hydroxide (pH 14)
3. Sodium Carbonate (pH 11)
4. Sodium Tallowate (pH 9-10)
5. Sodium Palmate (pH 9-10)
6. Sodium Cocoate (pH 9-10)
7. Sodium Olivate (pH 9-10)
8. Triethanolamine (pH 10-11)
9. Diethanolamine (pH 10-11)
10. Magnesium stearate (pH 9-10)

Traditional Soap Bases

1. Tallow Soap
(animal fat-based, pH 9-10)

2. Castile Soap
(olive oil, palm oil or coconut oil-based, pH 9-10)

3. Lye Soap – White soap
(sodium hydroxide-based, pH 10-11)

4. Black soap
(potassium hydroxide-based, pH 10-11)

pH-balanced synthetic detergents (syndets) used in skin cleansers

Anionic Surfactants:
1. Sodium Lauroyl Sarcosinate (pH 5.5)
2. Sodium Cocoyl Isethionate (pH 5.5)
3. Disodium Lauryl Sulfosuccinate (pH 5.5)
4. Sodium Lauryl Sulfoacetate (pH 5.5)
5. Ammonium Lauryl Sulphate (pH 5.5-6.5)

Non-ionic Surfactants:
1. Polysorbate 20 (pH 5.5-6.5)
2. Decyl Glucoside (pH 5.5-6.5)
3. Lauryl Glucoside (pH 5.5-6.5)
4. Cetearyl Glucoside (pH 5.5-6.5)
5. Sucrose Cocoate (pH 5.5-6.5)

Amphoteric Surfactants:
1. Cocamidopropyl Betaine (pH 5.5-6.5)
2. Lauramidopropyl Betaine (pH 5.5-6.5)
3. Sodium Cocoyl Amphoacetate (pH 5.5-6.5)
4. Disodium Cocoamphodiacetate (pH 5.5-6.5)
5. Sodium Lauroyl MethylAmphoacetate (pH 5.5)

Zwitterionic Surfactants:
1. Sodium Lauroyl Sarcosinate (pH 5.5)
2. Sodium Cocoyl Glycinate (pH 5.5-6.5)
3. Sodium Lauryl Glycinate (pH 5.5-6.5)
4. Cocamidopropyl Hydroxysultaine (pH 5.5-6.5)
5. Sodium Cocoyl Alaninate (pH 5.5-6.5)

Figure 2: Types of Skin-cleansing Agents (Soaps and Syndet molecules)[1-3]

In hot and humid tropical climates like Nigeria, bathing one to three times daily is a common practice, increasing soap usage and heightening the risk of skin irritation. Additionally, many healthcare professionals in Nigeria continue to recommend and even endorse alkaline or medicated soaps without full awareness of their potential negative effects, which can inadvertently worsen certain skin conditions or hinder treatment outcomes.[11,12] Thus, there is a need to document the pH of commonly used soaps and cleansers in Nigeria and highlight the potential effects of the pH of soaps or syndets on skin health. Addressing this knowledge gap could guide clinicians and patients in choosing appropriate skin cleansers, particularly for sensitive or dry skin or inflammatory skin conditions like atopic dermatitis, seborrhoeic dermatitis, acne vulgaris, and rosacea.

This study aimed to determine the pH and cost of commonly available soaps and cleansers used by dermatology patients in Southwest Nigeria and discuss relevant finding implications.

METHODS

Based on clinic records, this observational cross-sectional study analyzed the pH of skin cleansers most commonly used by patients attending the dermatology clinics of the Lagos State University Teaching Hospital, the University College Hospital Ibadan, and some private dermatology clinics in Lagos and Ibadan, Southwest Nigeria. The selected cleansers were purchased from random supermarkets, pharmacies, and cosmetic stores in Lagos. The cleansers were categorized into the following:

1. **Toilet soap** – soap formulations devoid of lightening or antiseptic agents
2. **Antiseptic soap** – soaps with antiseptic agents like chloroxylenol, triclosan, etc, as part of their formulation.
3. **Lightening soap** – soaps with lightening agents like alpha or beta hydroxy acids, mercury, hydroquinone, kojic acid, etc, as part of their formulation.
4. **Liquid syndet** – syndet cleansers in liquid form.
5. **Syndet bar** – syndet cleansers in solid/bar form.

All soap or syndet samples were prepared as 10% emulsions by mixing 1g or 1ml of the solid or liquid cleanser respectively into 9 ml of distilled water and kept for 1-2 hours at room temperature (25°C). The pH of each sample was measured using an MColorpHast pH test strip (one reading) and a Lawnful digital water pH meter (two readings), both of which have a full measurement of pH range (0 to 14). The pH strip has an accuracy of ±0.5 pH, while the digital pH meter has an accuracy of ±0.01 pH at 25°C. Distilled water (pH 7) and pre-packed calibrator fluids were used to calibrate the pH meter and ensure accuracy.

The weight and cost of a single unit of each soap or cleanser purchased and the country of manufacture were also documented.

Simple descriptive statistics were used to calculate the mean pH of the samples, the range, and the mean cost of the soaps and cleansers analysed. The student's t-test was used to determine any statistically significant difference between the mean pH and the mean cost of locally manufactured with imported soaps or cleansers.

RESULTS

Sixty cleansing agents were analyzed; 35 (58.3%) were locally manufactured, while 25 (41.7%) were imported. Forty-nine (81.7%) were in solid or bar form, and 11(18.3%) were in liquid form. The locally manufactured soaps were predominantly in solid bar form, with 35 out of 49 solid bars (71.4%) being locally produced, while 14 (28.6%) were imported. None of the locally manufactured products was in liquid form; all 11 liquid washes (18.3%) were imported. Table 1 documents these characteristics.

There was no significant difference between pH values recorded from the pH strips and the pH meter, and the pH of the digital meter was used for the analysis. The pH of all the cleansers ranged from 5.1 to 10.87, with a mean pH of 9.07 (See Table 1). Forty-five cleansers (75%), all soap in formulation, had a highly alkaline pH of between 9 and 11, while 15 cleansers (25%), all syndets in formulation, had an acidic pH of between 5.1 and 6.6. (See Figure 3)

Table 1 – Characteristics of Skin Cleansers Used by Dermatology Patients

Characteristics	Locally manufactured	Imported	N (% of Total)	p-value
Frequency n(%)	35 (58.3)	25 (41.7)	60 (100)	
Solid bars n(%)	35 (71.4)	14 (28.6)	49 (81.7)	0.00*
Liquid washes n(%)	0 (0)	11 (100)	11 (18.3)	0.00*
Alkaline soap n(%)	35(58.3)	10(16.7)	45(75.0)	0.00*
Acidic Syndets (pH-balanced)	0(0)	15(100)	15(25.0)	0.00*
Parameters	**Locally Manufactured**	**Imported**	**All cleansers**	**p value**
Mean pH	10.32±0.38	7.08±2.09	9.07±2.06	0.00*
Mean cost in Naira	800.0±999.48	5830.67 ±5504.03	2857.89± 4311.98	0.0003*

The mean pH of the locally manufactured soaps was 10.32, whereas the mean pH of imported soaps was 7.08. The difference between the mean pH of locally manufactured and imported cleansers was statistically significant, with a p-value of 0.00001.

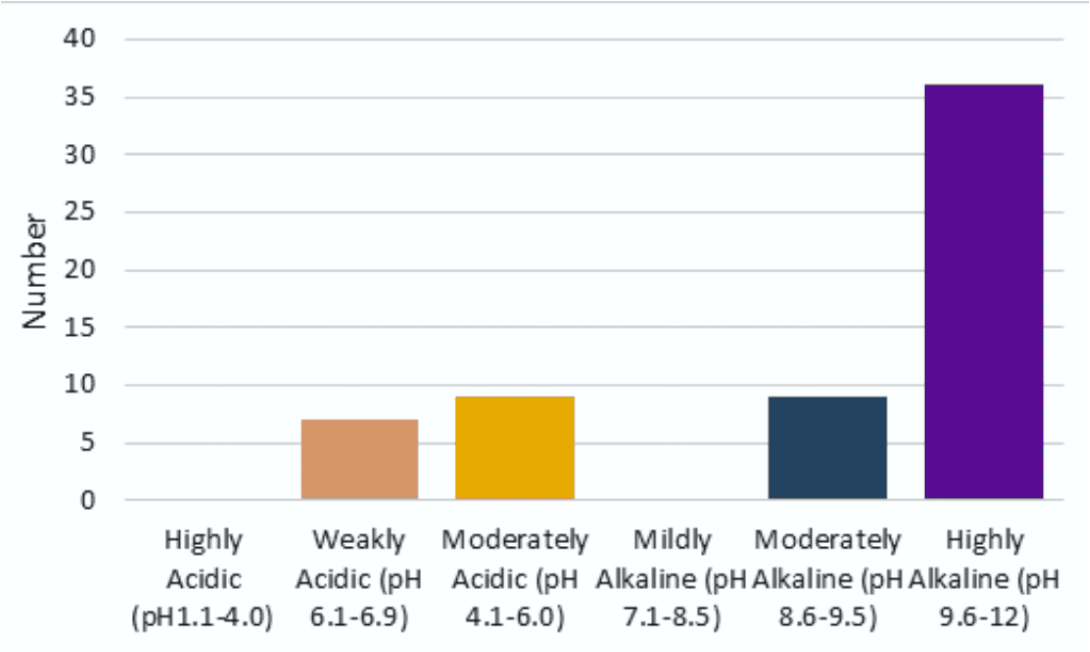

Figure 3 – Degree of Acidity and Alkalinity of Cleansers in this Study

Table 2 - pH of common soaps and cleansers using MColorpHast pH test strips

SOLIDS						LIQUIDS	
Medicated soaps		**Lightening soaps**		**Toilet soaps**		**Liquid cleansers**	
Awa medicated	10.5	**Asantee papaya**	10	**Awa soap**	10	**Atoderm**	5.5
Carat	11	**Black soap (organic)**	10	**Bio-oil**	9	**Aveeno baby**	6
Crusader	10	**Carotone**	10	**Cussons**	9	**Carex**	6
Delta	11	**Caro white**	10	**Dr. Teals**	10	**Cerave**	5.5
Dettol Cool	10	**Extract**	10	**Eva**	9.5	**Cetaphil**	5.5
Dudu Osun	10	**Fair and white**	10	**Forever avocado**	10	**Clearasil**	5.5
Lifebuoy	10.5	**Hawaii**	10	**Ghana Soap**	10	**Dove baby**	6.5
Meriko	11	**Idole papaya**	10	**Imperial leather**	11	**Sebamed (adult & baby)**	5.5
Okin	11	**Idole**	10	**Irish Spring**	9	**Simple**	5.5
Premier Cool	11	**K brothers**	10.5	**Johnsons baby**	9	**Sanex liquid wash**	5
Safeguard	10.5	**Kojie san soap**	10	**Joy**	11	**La Roche Posay lipikar wash**	6
Sanitol	10			**Local black soap**	11	**Topicrem liquid wash**	5
Savlon	11			**Lux**	9		
Septol	10.5			**Neutrogena**	9.5		
2Sure herbal soap	10			**Palmolive**	10		
Tetmosol	10.5			**Pears baby**	9		
Tura	10			**Premier**	10		
				Olay	6.5		
				Supreme	11		
				Syndet Bars			
				Dove	6.5		
				Nivea	6.5		
				Sebamed	5.5		

Table 3 – Weight, Cost, Country of Manufacture and pH (with Lawnful digital pH meter) of common soaps and cleansers

	Soap or Cleanser	Weight or Volume	Market price (Naira)	Country of Manufacture	pH
1.	**Asantee papaya soap**	**150g**	**1400**	**Thailand**	**10.22**
2.	Awa medicated soap	60g	200	Nigeria	10.61
3.	Awa plain soap	60g	200	Nigeria	10.59
4.	**Atoderm liquid wash**	**200ml**	**15,000**	**France**	**5.32**
5.	**Aveeno baby wash**	**250ml**	**15,000**	**US**	**5.87**
6.	Bio-oil soap	250g	2300	Nigeria	9.46
7.	Carotone soap	180g	1400	Nigeria	10.31
8.	Caro white soap	180g	1000	Nigeria	10.18
9.	**Carex liquid wash**	**250ml**	**2600**	**UK**	**5.39**
10.	**Cerave hydrating wash**	**236ml**	**13,00**	**US**	**5.32**
11.	**Cetaphil body wash**	**237ml**	**12,500**	**US**	**5.28**
12.	Cussons baby soap	70g	250	Nigeria	9.51
13.	**Crusader soap**	**80g**	**1000**	**India**	**10.42**
14.	Delta	70g	250	Nigeria	10. 86
15.	Dettol cool	160g	600	Nigeria	10.26
16.	Dettol Skincare	160g	1000	Nigeria	10.18
17.	**Dove beauty bar**	**100g**	**1500**	**US/Germany**	**6.57**
18.	**Dove baby wash**	**400ml**	**8,500**	**US/ Germany**	**6.43**
19.	Dudu Osun black soap	150mg	550	Nigeria	9.87
20.	**Extract whitening soap**	**125g**	**1300**	**Thailand**	**10.13**
21.	Eva soap	75g	350	Nigeria	9.63
22.	Fair and white soap	200g	5500	Nigeria	10.24
23.	**Forever avocado soap**	**150g**	**2200**	**US**	**9.89**
24.	Ghana soap	400g	2000	Nigeria	10.26
25.	Hawaii soap	200g	1100	Nigeria	10.42
26.	Idole soap	120g	1200	Nigeria	10.15
27.	Idole papaya soap	120g	1300	Nigeria	10.11
28.	Imperial Leather soap	150g	700	Nigeria	10.59
29.	**Irish Spring soap**	**110g**	**1500**	**US**	**9.35**
30.	**Johnsons baby soap**	**125g**	**500**	**US**	**9.22**
31.	Joy soap	90g	250	Nigeria	10.68
32.	**K-brothers soap**	**150g**	**1500**	**Thailand**	**10.44**
33.	**Kojie-san soap**	**135g**	**5000**	**Philippines**	**10.42**
34.	Lifebuoy soap	110g	300	Nigeria	10.43
35.	**La Roche Posay Lipikar syndet liquid wash**	**200ml**	**14,000**	**France**	**5.13**

36. Local black soap	500g	2200	Nigeria	10.76
37. Lux soap	90g	250	Nigeria	9.54
38. Meriko soap	80g	300	Nigeria	10.79
39. Nivea bar	**100g**	**1200**	**Germany**	**6.41**
40. Neutrogena bar	**100g**	**1500**	**UK**	**9.36**
41. Olay bar	**113g**	**900**	**US/ South Africa**	**6.46**
42. Okin soap	65g	200	Nigeria	10.87
43. Organic black soap	300g	500	Nigeria	10.22
44. Palmolive soap	90g	1300	Nigeria	9.78
45. Pears baby soap	**125g**	**1000**	**India**	**9.16**
46. Premier soap	60g	300	Nigeria	10.23
47. Premier cool soap	60g	300	Nigeria	10.35
48. Safeguard soap	70g	300	Nigeria	10.42
49. Sanitol soap	75g	200	Nigeria	10.31
50. Sanex body wash	**200ml**	**9,500**	**UK**	**5.20**
51. Savlon soap	120g	250	Nigeria	10.87
52. Sebamed cleansing bar	**150g**	**3,500**	**Germany**	**5.54**
53. Sebamed liquid wash	**200ml**	**7,500**	**Germany**	**5.48**
54. Septol soap	70g	250	Nigeria	10.61
55. Simple body wash	**250ml**	**6,000**	**UK**	**5.19**
56. 2Sure antiseptic soap	75g	500	Nigeria	10.41
57. Supreme soap	75g	450	Nigeria	10.78
58. Tetmosol antiseptic soap	75g	300	Nigeria	10.34
59. Topicrem liquid wash	**200ml**	**17,500**	**France**	**5.33**
60. Tura medicated soap	120g	1000	Nigeria	10.25

**Products in bold ink are imported, while those in normal ink are locally manufactured in Nigeria*

All 35 locally manufactured cleansers (100%) were alkaline soaps, while 10 of the 25 imported cleansers (40%) were also alkaline soap formulations. Most of the imported alkaline cleansers were manufactured in Asia, while most imported syndets were manufactured in the UK and Europe. The most common soap molecule in the selected soap cleansers was sodium palmate, while the most common syndet molecule was cocoamidopropyl betaine **(see Figure 4).**

The average cost of locally manufactured soaps was N800, whereas the average cost of imported soaps was N5830, indicating that imported products are significantly more expensive. The difference in mean costs is statistically significant ($p = 0.00003$).

DISCUSSION

This study shows that the soaps and cleansers commonly used by dermatology patients, and by extrapolation, the general populace in Nigeria, are alkaline. Furthermore, all locally manufactured cleansers are alkaline soaps. This is consistent with studies from South Africa, Sri Lanka, and India.[13-15] However, studies from Poland and Brazil reported that most cleansers available in these regions were acidic or neutral.[16,17] These findings suggest that the irritant potential of alkaline soaps has been considered in the formulation of cleansers in some parts of the world but is yet to be in many developing countries, including Nigeria. All liquid washes analyzed were acidic, which is similar to findings by

Alkaline Cleansing Agents in Soaps in this study
1. Sodium Palmate
2. Sodium Cocoate
3. Sodium Oleate
4. Triethanolamine
5. Diethanolamine
Syndet Cleansing Agents in pH balanced cleansers in this study
1. Cocamidopropyl Betaine
2. Sodium Cocoyl Isethionate
3. Decyl Glucoside
4. Disodium Lauryl Sulfosuccinate
5. Sodium Lauryl Sulfoacetate
6. Glyceryl Cocoate

Figure 4 – Common cleansing agents in soap and syndet formulations in this study

Mendes et al. in Brazil.[17] The predominance of highly alkaline soaps suggests that many people may be exposed to harsh skincare products. Raising awareness and promoting the local production of pH-balanced, affordable soaps could improve dermatological outcomes.

The pH of soaps and cleansers should be an important consideration when managing sensitive, dry, or inflamed skin conditions.[5,8,10] Alkaline cleansers can exacerbate conditions associated with an elevated skin surface pH and transepidermal water loss (TEWL) and further impair skin barrier integrity.[5,8,18] Highly alkaline soaps can also alter the skin's microbiome by reducing normal flora, which could stimulate or aggravate untoward inflammatory responses or lead to infection.[19-21] Thus, skin irritation and barrier impairment from using highly alkaline soaps can impair treatment outcomes and the patient's quality of life.[7,15,22] For conditions like atopic dermatitis, psoriasis, acne, and rosacea, pH-balanced cleansers and moisturizers are recommended to prevent irritation, dryness, and skin dysbiosis.[10,20,23,24] A systematic review by Lichterfeld et al. supports using pH-balanced or soap-free cleansers as an evidenced-based recommendation for optimal skin care.[25] A study in Nigeria observed that alkaline soaps did not cause irritation or affect the pH of normal skin but did cause dryness, as evidenced by reduced sebum levels.[26]

None of the acidic syndets were manufactured in Nigeria; they were all imported from Europe or the US and were significantly more expensive than local soaps, costing over 7 times more. The higher cost of these pH-balanced products may limit their use among the general population. However, for individuals with inflammatory dermatoses or sensitive skin, using more expensive pH-balanced cleansers may ultimately save on treatment costs by preventing irritation.[25] The absence of locally manufactured syndets and liquid washes highlights a gap in the domestic market. The continued production, recommendation, and use of alkaline soaps in Nigeria likely stems from a lack of awareness of the benefits of pH-balanced cleansers and the potentially higher manufacturing costs. Local production of pH-balanced syndet cleansers could make them more affordable and accessible to the wider population, offering gentler, skin-friendly alternatives that protect the skin barrier.

CONCLUSION

Most of the common commercially available cleansers used by dermatology patients in Nigeria are alkaline soaps, which could negatively affect skin health, particularly for those with sensitive or inflammatory skin conditions. Nigerian-made soaps have a significantly higher pH than foreign-made cleansers, most of which are syndets and tend to have a lower, more skin-friendly, and less irritating

pH. While Nigerian-made soaps are more affordable, their higher pH may irritate the skin. Increasing awareness of pH-balanced cleansers among healthcare practitioners and promoting their use among dermatology patients and the general public could improve the management of certain conditions and overall skin health.

RECOMMENDATIONS

Clinicians and dermatologists in Nigeria and Africa can use this study as a reference when recommending soaps and cleansers for patients, especially those with inflammatory dermatoses. Further research is required to assess public awareness of cleanser pH and to compare the effects of alkaline soaps with pH-balanced cleansers on skin health in Nigeria.

Medical regulatory bodies, public health agencies, and manufacturing industries in Nigeria and other developing countries should acknowledge the importance of skin cleanser pH, as has been done in developed countries. There is a need to review industry standards for cleanser formulations and look into producing more affordable, pH-balanced cleansers that support optimal skin health.

Conflict of Interest - The authors have no conflict of interest to declare.

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