Manuscript Revised File

- All words / sentences / paragraphs highlighted in yellow are well reviewed (some are deleted, added, or modified etc.) as the context requires.
- Please, write the article according to the General Guidelines for Manuscript Preparation for JPIR system.
- The language of writing in the research is not good at all and is incorrect.. Reviewing the entire language of the research.. As all parts of the research need a comprehensive linguistic review.
- Very important: The researcher's scientific writing experience is insufficient/weak.I think that the research has not been considered or reviewed by specialized professors.
- **Very very important..**This paper is not based on rigorous academic standards..The scientific basis of the study on which the researcher (s) relied (the qualitative analysis of the bioactive compounds in the plant part under study) is completely incorrect, and is not practically suitable for research studies for the following reasons:
  a. The qualitative analysis of the compounds is evidence only of the presence of these compounds in the plant part(s), regardless of their presence in large concentrations or in very small concentrations that may reach traces, which results in not specifying any kind of importance/significance (food - medical - economic etc.).
  b. - The bioactive compounds may be present in the plant part at a concentration of "traces", as the test showed. However, there is no benefit in that because such weak concentrations are unable to cause any of its biological effects.
  c. - In scientific research (explanation of significance - comparisons - discussions, etc.), only quantitative estimates of the compounds to be estimated are considered. As the qualitative analysis has no limits or meaning for its terms such as: present, absent etc.
  d. - The qualitative analysis does not come out with concentrations or percentages of compounds, and therefore it is not suitable for conducting studies of importance and economic feasibility.
  e. - Qualitative analysis is not possible by transferring the study from the laboratory scale to the applied/large scale.
  f. - As long as the researcher has based his recommendations mainly on the qualitative analysis, the recommendations resulting from the study are weak and unrealistic and it cannot be relied upon to transfer the study from the laboratory scale to the applied/large scale.
- The research lacks the simplest scientific rules used in writing research.For example, it is very strange that the results of the study are placed under the research materials and methods section. Also, the part of results is without the results etc.???
- Experience in scientific writings is not good. None of the professional rules or principles was taken into account in writing all parts of the research.And if you please, first look at similar research published in local and international scientific journals and read it well.

Original Research Article

In-vitro Antioxidant and Pharmacognostic Studies of _Phaseolus vulgaris (Linn)_ seed coat

ABSTRACT

- This part (Abstract) is not good.
- The abstract has some rules and scientific principles in writing, as it consists of: The objective of the study - a summary of the experimental design - some results or numbers reached by the study - in the end, the study's abstract, In conclusion, etc.
- The sentences should be placed in the appropriate place without mixing

Aim: The objective of developing novel anti-epileptic herbal agent with fast therapeutic action and low toxicity profile of *Phaseolus vulgaris (Linn)* seed coat was evaluated.

Study Design: The pharmacognosticprofile along with *in-vitro* estimation of bioactive compounds present were studied.??????????

~~**Place and Duration of Study:** Department of Pharmacology, I. T. S College of Pharmacy, Muradnagar, Ghaziabad, India between May 2020 and December 2020.~~

Methodology: Morphology revealed dark brownish red seed, kidney to oval shaped, medium size and bland taste. Seed length, width, thickness, and surface area were also determined.

Does this part follow research methods or results?

Microscopically, the transverse section also showed the presence of proteinaceousaleurone cells, macro-sclereids and starch granules with irregular oval shape in the cotyledon specify the energy reservoir of seeds. In physico-chemical parameters such as extractive value ash value, moisture content, swelling index were recorded. Phytochemical screening displayed the presence of alkaloids, flavonoids, phenol, amino acid, tannins, carbohydrates and saponins. HPTLC *&in-vitro* estimations were done.

- The entire term is written after the abbreviation in parentheses for the first time only and then the abbreviations are used only after that throughout the search

Result:HPTLC study was performed to standardize the extract of *Phaseolus vulgaris* seed coats for the presence of flavonoids. The antioxidant profile revealed TFC as 13.62 mg /g

QE and TPC as 32.03 ± 1.50 mg/g GAE. IC_{50} value for vitamin C was found to be 369.03 µg/ml as compared to *Phaseolus vulgaris* seed coat 423.00 µg/ml.

Conclusion: The study can serve as a valuable source of information[What does that means????????] and it could be beneficial in the treatment of epilepsy.

Keywords: *Phaseolus vulgaris, pharmacognosy, antioxidant, bioflavonoids, epilepsy.*

- It is preferable that the keywords do not contain the words contained in the study title (because the title words appear mainly on the search on the international information network), so other words from the estimated search results are preferred to increase the chances of the search appearing on the international information network.

1. INTRODUCTION

– The introduction to the research lacks all the principles and rules of professional writing. Everything that is written has nothing to do with the content of the research at all. For example, you are talking about ***Phaseolus vulgaris (Linn)*** **seed coat**and its bioactive compounds only, what does this have to do with epilepsy?

– The introduction has principles of writing that must be taken into account (refer please to similar research in major scientific journals to realize what is written, which is completely away from any scientific professional)

Epilepsy is chronic mental disorder, generally ensuing in doubtful, indefensible recurrent seizure [1].“Epilambanein” a greek word, which means to attack or seize is now being termed as “Epilepsy” [2].Seizures are classified according to modified version of International Classification of Epileptic seizure (ICES) that is partial (focal) seizure, generalized seizure such as atonic, clonic, tonic-clonic (grand-mal), absence (petit-mal) seizure and unclassified seizure (neonatal, infantile) [3]Anti-epileptic

drugs (AEDs) like valproic acid, phenytoin, carbamazepine, phenobarbital, clonazepam etc. are mostly used to control epileptic seizure [4].

AEDs have low efficiency, limited supply, high cost and adverse effects such as dizziness, disturbance in coordination, sedation, mood alteration, sexual dysfunction etc, as compared to herbal medicines. Herbal medicines are generally well tolerated with lesser side effects. They have a broad spectrum because they are an assortment of bioactive compounds [5].

Phaseolus vulgaris (Red kidney bean) have excellent sources of proteins, energy, carbohydrates, minerals and vitamins. It contains flavonoids such as kaempferol [6], quercetin [7], naringin [8], rutin [9] etc. These flavonoids have protective effect in epilepsy. *Phaseolus vulgaris* is used as anti-oxidant, anti-inflammatory [10], anti-diabetes [11], anti-proliferative [12]and effective in neurodegenerative disease such as anti-parkinsonism [13].

- Where is the aim of the study? It is the simplest scientific rules that the introduction to the research ends with the aim of the study.

2. MATERIAL AND METHODS

- What is written under this part has nothing to do with the materials and methods of research.One of the epidemiology of research is that this part deals with research materials and methods of analysis and their documentation.
- It is very strange that the results of the study are placed under the research materials and methods section.

2.1 Procurement and Authentication: The seeds of *Phaseolus vulgaris* were identified and procured from the local market of Modinagar, Ghaziabad. The material was authenticated by **Dr. SunitaGarg**, Emeritus Scientist, CSIR-National Institute of Science Communication and Information resources (NISCAIR), Pusa Campus, New Delhi. A voucher specimen was deposited at RHMD, New Delhi.

3. PHARMACOGNOSY

- What's this???How important is that???? these parts are superfluous

- Scientific writings are in the form of documented paragraphs, and not in this form, which does not exist from a scientific point of view.

3.1 Vernacular name: Vernacular names are mentioned in Table 1 [14].

Table1: Vernacular name of *Phaseolus vulgaris*

Languages	Names
English	Kidney bean
Hindi	Rajma
Bengali	BarbatiBeej, Raajma
Telugu	Chikkuduginjalu, nallachikkudu
Kannada	Capparadavare
Oriya	BaragudiChhuin, Rajma
Malayalam	Rajma
Tamil	SigappuKaaramani
Urdu	Lallobia
Portuguese	Feijao (dry), Feijao-vagem (green)
Italian	Fagiolo, Faxoe, Faisoe (Liguria), Fasoel
Spanish	Caraota, Chaucha

- What's this??? How important is that???? These parts are superfluous.

- Scientific writings are in the form of documented paragraphs, and not in this form, which does not exist from a scientific point of view.

3.2 Taxonomical classification: Taxonomical classification has been mentioned in Table 2.

Table 2: Taxonomical classification of *Phaseolus vulgaris*

Kingdom	Plantae

Sub-kingdom	Viridiplantae
Super-division	Embryophyta
Division	Tracheophyta
Subdivision	Spermatophtina
Class	Magnoliopsida
Order	Fabales
Family	Fabaceae
Genus	Phaseolus
Species	*Phaseolus vulgaris L*
Synonym (s)	*Phaseolus vulgaris* var. humilis, *Phaseolusaborigineus*Burkart

3.3 Nutritional value: The seeds of *Phaseolus vulgaris*are nutritionally essential and have following crucial components shown in Table 3 [15].

- What's this???These are studies of others, what is the importance of their presence here.
- Scientific writings are in the form of documented paragraphs, and not in this form, which does not exist from a scientific point of view.

Table 3:Nutritional value of *Phaseolus vulgaris*

Basic components (mg/g)		**Fatty acid (mg/g)**	
Total lipids	10.60	Total saturated	1.54
Protein	225.30	Total monounsaturated	0.82
Carbohydrates	612.90	Total polyunsaturated	5.86
Essential minerals (mg/g)		**Vitamins (mg/g)**	
Macro-minerals		Ascorbic acid (C)	0.045
Calcium	0.83	Thiamine (B1)	0.00608
Magnesium	1.38	α-tocopherol (E)	0.0021
Potassium	13.59	Folate	0.00394

Phosphorus	4.06	Niacin (B3)	0.0211
Sodium	0.12	Phylloquinone (k)	0.056µg/g
Micro-minerals		Pyridoxine (B6)	0.00397
Zinc	0.0279	Retinol	---
Iron	0.0669	Riboflavin (B2)	0.00212
Total dietary fibre	0.1520	**Caloric value**	3.37 kcal/g

3.4 Phytoconstituents:

What's this??? For various pharmacological activities, the main phenolic compounds in common beans can be summarized as phenolic acids, flavonoids, proanthocyanidins, and coumarins. In brief it contains Quercetin 3-O-glucoside, kaempferol 3-O-glucoside, myricetin, *p*-coumaric acid derivatives, ferulic acid derivatives, ferulic acid, caffeic acid, vanillin aldehyde[16], Catechin, epicatechin, epigallocatechin, quercetin, naringenin, chlorogenic acid, cichoric acid, coumaric acid, vanillic acid[12].

- What is written under this part has nothing to do with the materials and methods of research.One of the epidemiology of research is that this part deals with research materials and methods of analysis and their documentation

3.5 Traditional Medicinal use: The seeds of *Phaseolus vulgaris* are recorded as diuretic chiefly in kidney and heart disease. They are also effective in lenient cases of diarrhoea [17].

- What is written under this part has nothing to do with the materials and methods of research.One of the epidemiology of research is that this part deals with research materials and methods of analysis and their documentation

3.6 Pharmacological activities: The extract of *Phaseolus vulgaris*seeds are used as antioxidant and anti-inflammatory [10],anti-diabetic [11],anti-Parkinson [13],anti-proliferative [12],hepato-

protective [18],trypsin, α-amylase [19, 20], analgesic, anti-fertility**,** litholytic[21] and antidepressant [22].

4. MORPHOLOGY

4.1 Physical Qualitative Characteristics: It includes following characteristics of seed viz, colour; shape; size; odour; taste and seed coat pattern.

The physical qualitative characteristics of seeds were evaluated as follows:

1) Seed colour – Dark brownish red
2) Seed shape – Kidney to oval shaped
3) Seed size – Medium
4) Seed coat Pattern – single colour on entire seed
5) Taste – Bland
6) Odour - None

4.2 Physical Quantitative Characteristics: Quantitative seed descriptors includes the physical evaluation (Table 4) of the following seven characteristics: average of 1 and 100 seed weight; seed length (L); seed thickness (T); seed width (W); diameter; volume and surface area. 1 and 100 seed weight were measured in six repetitions using a digital weighing balance. 10-randomly selected fully developed undamaged seeds were measured in six repetitions using a Vernier calliper (least count of 0.1mm). Length, Thickness and Width were measured from the highest, lowest aligned to hilum, and from hilum to the opposite side respectively. Various diameter means viz. Arithmetic (AMD), Geometric (GMD) and sphericity (ϕ) of kidney bean was calculated using equations given by. [23] Also, parameters like volume (V) and surface area (S) which depends on axial dimension (length) was calculated for single bean [24].

Table 4: Physical Quantitative Characteristics of *Phaseolus vulgaris*

Sr. No.	Parameters	Mean ± S.E.M
1.	Seed length (L in cm)	2.090 ± 0.023
2.	Seed thickness (T in cm)	0.887 ± 0.010
3.	Seed width (W in cm)	1.150 ± 0.011
4.	Arithmetic mean diameter (AMD in cm)	1.376 ±0.012

5.	Geometric mean diameter (GMD in cm)	1.287 ± 0.011
6.	Volume (in cm^3)	1.310 ± 0.035
7.	Surface area (in cm^2)	6.103 ± 0.110
8.	Sphericity (ϕ)	0.616 ± 0.004
9.	Weight variation within seed (one seed/g)	0.34 **±** 0.03– 0.72 ± 0.03
10.	Weight of 100 seeds (in g)	47.06 ± 0.373

4.3 Physico-chemical Parameters: Various physico-chemical parameters were estimated (Table 5) in triplicates, viz. moisture content, extractive values, ash values and swelling index. It gives an idea about the quality and purity of crude drugs.

Table 5: Physico-chemical Parameters of *Phaseolus vulgaris*

Sr. No.	Parameters	Determined values (% w/w)
A.	**Moisture Content**	1.03 ± 0.23
B.	**Extractive values**	
1.	Alcohol soluble extractive value	10.46 ± 0.65
2.	Water soluble extractive value	19.75 ± 0.41
C.	**Ash Values**	
1.	Total ash	1.87 ± 0.02
2.	Acid insoluble ash	0.33 ± 0.02
3.	Water soluble ash	0.82 ± 0.03
D.	**Swelling index (in cm)**	1.01 ± 0.06

5. MICROSCOPY

The microscopy was done using optical microscope (Olympus vanoz-s-AH-2, Japan) with various optical magnification and images were captured employing a digital camera. The cross section in Fig. 1 of soaked whole red kidney bean, visualizes the presence of three cell layers: the **cotyledon (A), endosperm (B) and testa /seed coat (C)** (helps from mechanical injury, predators & drying out).

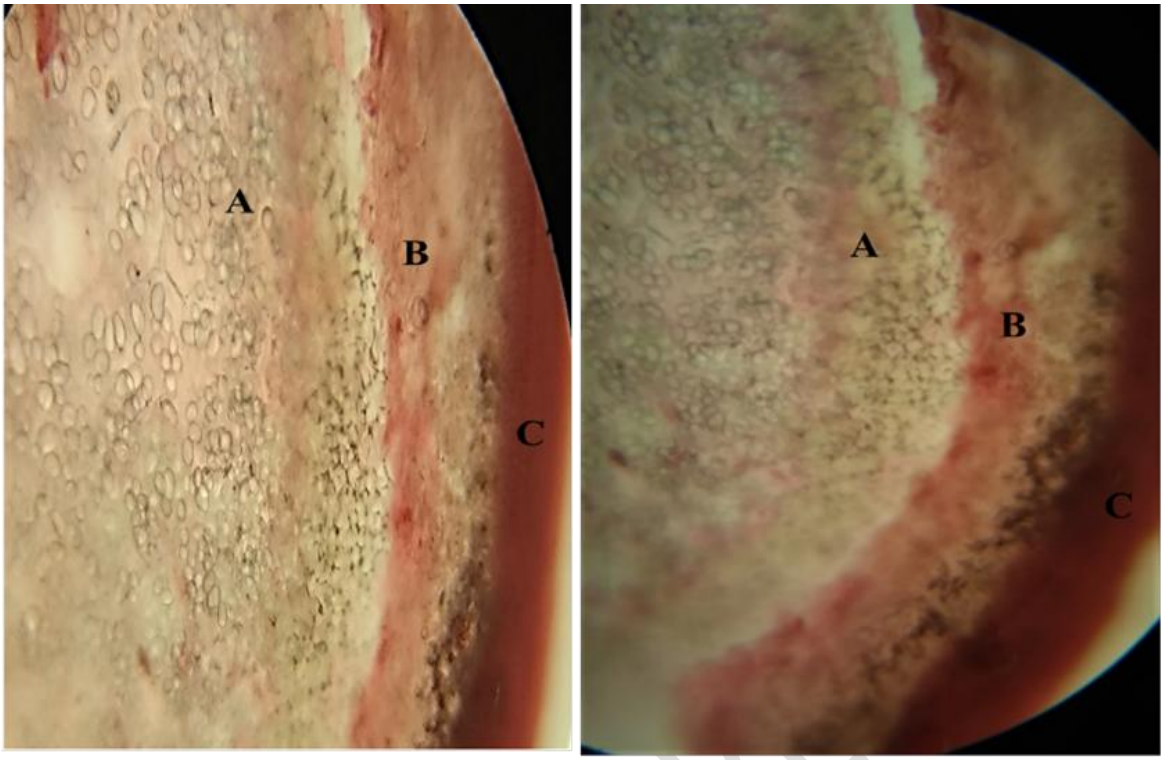

Figure 1: Optical light microscopy of red kidney bean (cross-section)

The transverse section (Fig 2) also showed the presence of **proteinaceousaleurone cells (blue arrow)**, **macro-sclereids (black arrow)**, which are important for the absorption of water by the seed are observed. The presence of **starch granules (yellow arrow)** with irregular oval shape in the cotyledon indicates the energy reserves of seeds.

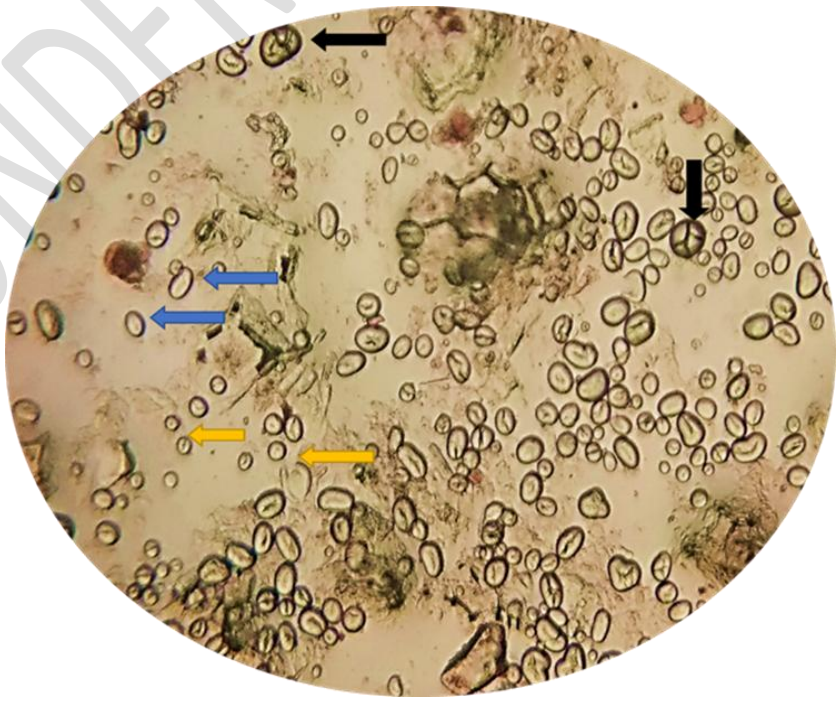

Figure 2: Transverse-section of red kidney bean

6. EXTRACTION & PHYTOCHEMICAL SCREENING

6.1 Soaking & Extraction procedure: The drug was collected and shade-dried at room temperature of about 25±2°C. 250g dry mature seeds of *Phaseolus vulgaris* were soaked overnight, for 16 h, in distilled water, on the proportion of 100 g per 300 mL of water (Figure 3). After soaking, seed coats were manually separated from cotyledons. Seed coats were further dried at room temperature, for an average period of 24 hours. Dried coats (7.97gm) were extracted without previous milling, with the ethanol: water (60:40, v/v) solution, followed by sonication. At the end using rotary flash evaporator under vacuum, the extract was concentrated to a semi-solid mass with the recovery of solvent. The traces of the solvents were separated by using lyophilizer. The resultant extract was stored at 4°C for future use.

The percentage yield was determined as follows:

$$\text{Percentage yield} = \frac{\text{Final weight of dried extract}}{\text{Initial weight of powder}} \times 100$$

Percentage yield = 23.30gm / 39gm× 100 = **58.97%**

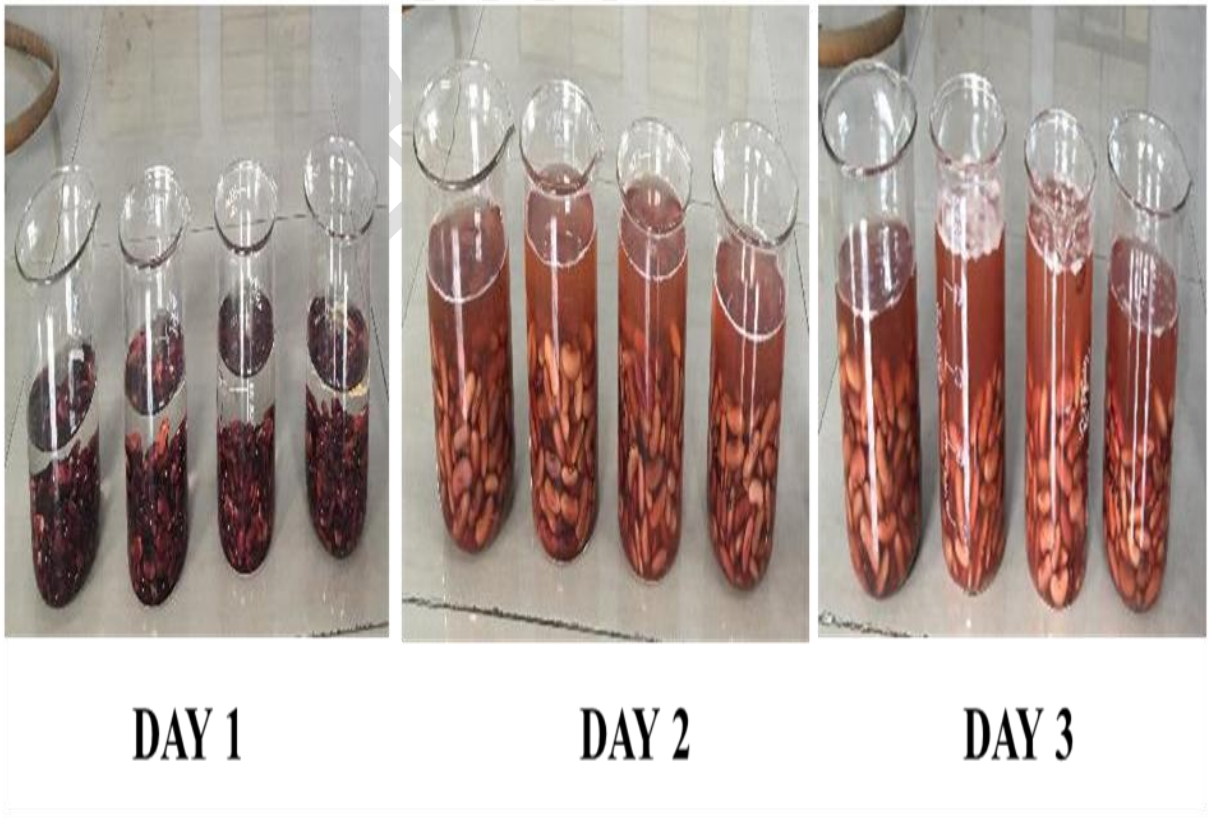

Figure 3: Soaking and extraction of red kidney bean

6.2 Preliminary phytochemical screening: Screening was performed as per standard protocol and results are depicted in Table 6 [25].

- **Very very important..**This paper is not based on rigorous academic standards..The scientific basis of the study on which the researcher (s) relied (the qualitative analysis of the bioactive compounds in the plant part under study) is completely incorrect, and is not practically suitable for research studies for the following reasons:
  g. The qualitative analysis of the compounds is evidence only of the presence of these compounds in the plant part(s), regardless of their presence in large concentrations or in very small concentrations that may reach traces, which results in not specifying any kind of importance/significance (food - medical - economic etc.).
  h. - The bioactive compounds may be present in the plant part at a concentration of "traces", as the test showed. However, there is no benefit in that because such weak concentrations are unable to cause any of its biological effects.
  i. - In scientific research (explanation of significance - comparisons - discussions, etc.), only quantitative estimates of the compounds to be estimated are considered. As the qualitative analysis has no limits or meaning for its terms such as: present, absent etc.
  j. - The qualitative analysis does not come out with concentrations or percentages of compounds, and therefore it is not suitable for conducting studies of importance and economic feasibility.
  k. - Qualitative analysis is not possible by transferring the study from the laboratory scale to the applied/large scale.
  l. - As long as the researcher has based his recommendations mainly on the qualitative analysis, the recommendations resulting from the study are weak and unrealistic and it cannot be relied upon to transfer the study from the laboratory scale to the applied/large scale.

Table 6: Phytochemical screening of *Phaseolus vulgaris*

BIOACTIVE COMPONENTS	RESULT
Alkaloids	Present
Carbohydrates	Present
Flavonoids	Present
Tannins	Present
Saponin	Present
Anthraquinone	Absent
Phenol	Present
Steroids	Absent

7. HPTLC OF BIOACTIVE COMPONENTS:

The ethanolic extract and flavonoid fraction were analyzed for the presence of flavonoids by comparing with the Rf value and spectral comparison with co-chromatographic standard compounds, Quercetin. HPTLC study was performed to standardize the extract of *Phaseolus vulgaris* seed coats for the presence of flavonoids in Figure 4[26].

HPTLC fingerprinting was performed by using winCATS software. Sample application was executed by CAMAG Linomat 5 and inert gas spray and methanol as solvent type was used . After application chromatogram developed Twin Trough Chamber 20x10cm with Tol :EA:FA (10:3:1) at 60° C for 5 minutes. CAMAG TLC Scanner 3 was used to detect spots (Figure 5). The result from HPTLC fingerprinting scanned at 254nm and 366nm for extract by using CAMAG Reprostar 3 illumination instrument.

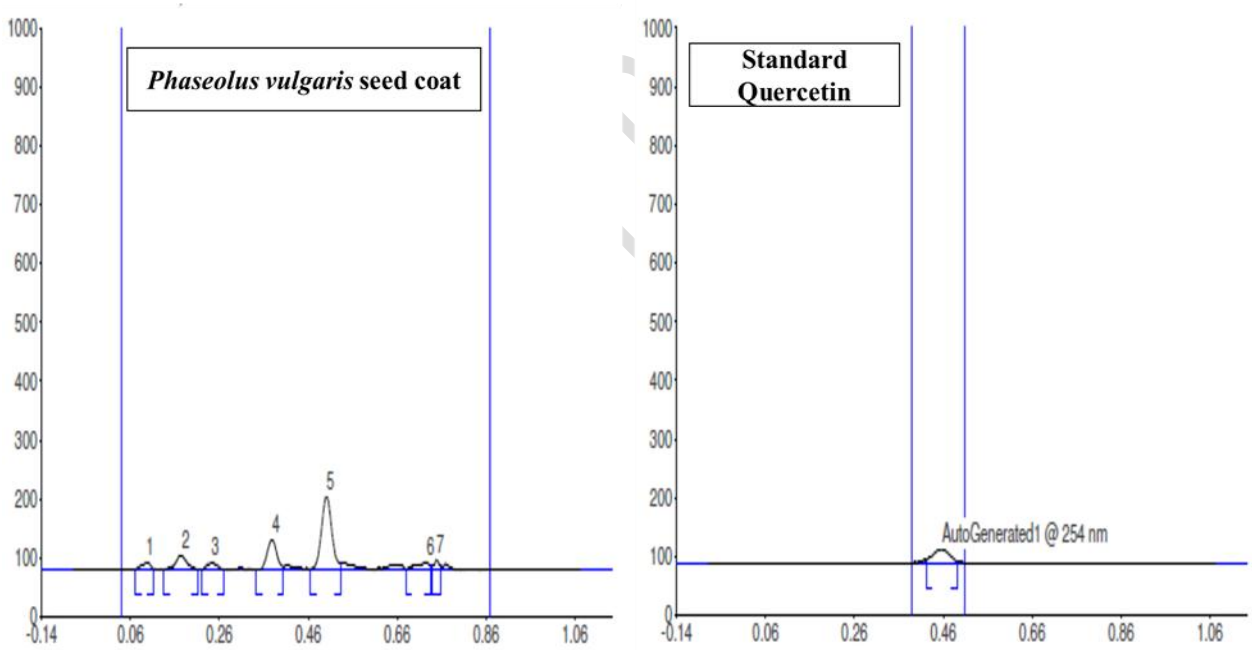

Figure 4: Spectral comparison of *Phaseolus vulgaris* seed coats with co-chromatographic standard, Quercetin.

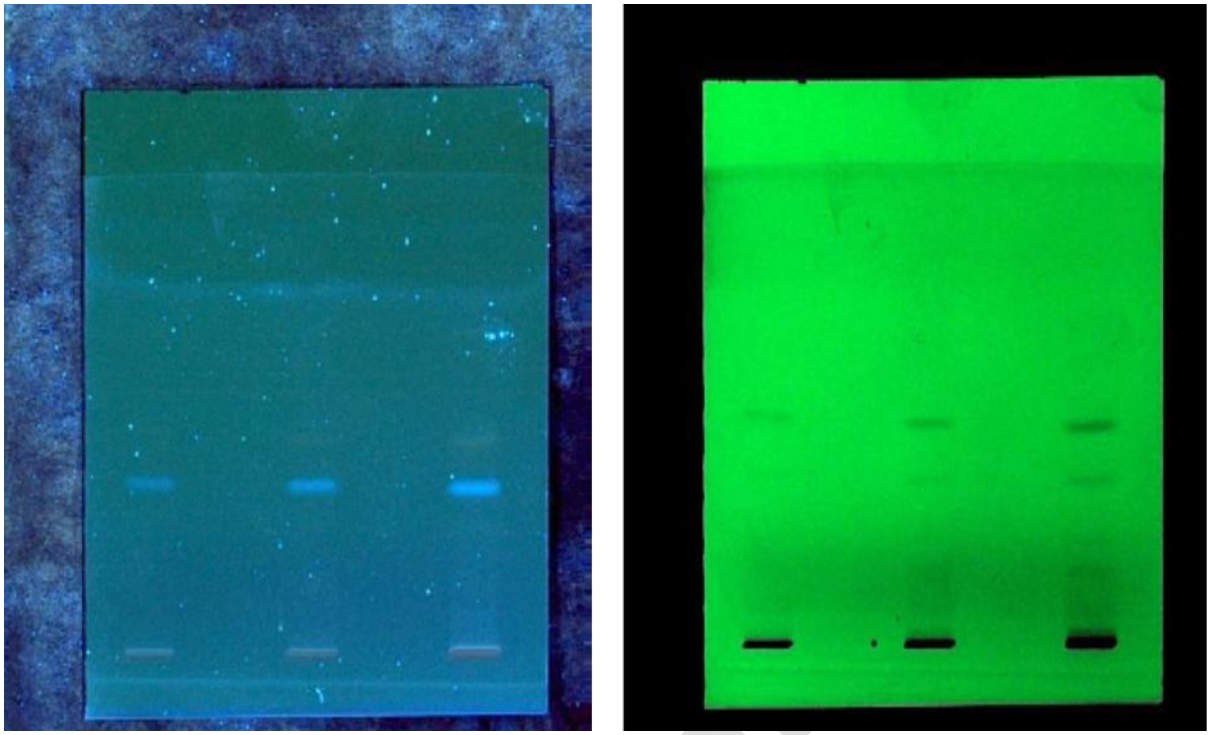

Figure 5: Detection of active phytoconstituents in *Phaseolus vulgaris* seed coat by HPTLC

8.*In-vitro*ESTIMATION OF BIOACTIVE COMPONENTS

8.1 Determination of total flavonoids (TF): The total flavonoid content was confirmed according to the procedure given[27]. 1 ml extract of 1000 µg/ml concentration 4 ml of purified water was mixed and then 0.3 ml $NaNO_2$& 0.3 ml $AlCl_3$ was added to solution after that mixture was incubated for 5 minutes at room temperature. Sodium Hydroxide (2ml) and purified water (2.4ml) was added to the incubated solution and the absorbance was measured at 510 nm with the help of spectrophotometer. Standard curve was used to determine Total Flavonoid content. Quercetin was used as standard and TF content was indicated as Quercetin equivalents (QE) in mg/g of dry sample. The results were shown in Table 7.

8.2 Determination of total phenols: Total phenolic content was evaluated by using Folin-Ciocalteu (FC) reagent. The evaluation was carried out spectrophotometrically as stated by [28]with minimum moderation. In a test tube,0.1 ml of extract (1mg/ml) was taken and then 1.9 ml distilled water and 1.0 ml of Folin– Ciocalteau's reagent was added in a test tube, after that 1.0 ml of 100 g/L Na_2CO_3 was added to the solution. The mixture was incubated at room temperature for 2 hours and the absorbance of the solution was measured at 765 nm using spectrophotometer. The standard

curve of gallic acid was used to estimation of Total Phenolic Content. The total phenolic compounds of the plant extracts were indicated as gallic acid equivalents (GAE) which showed the phenolic content equal to the gallic acid (mg/g) of dry material. The results were shown in Table 7.

Table 7: *In-vitro* antioxidant potential of *Phaseolus vulgaris* seed coat

***Phaseolus vulgaris* seed coat**	**Total Flavonoids Content(TFC in mg /g QE)**	**Total Phenolic Content(TPC in mg/g GAE)**
	13.62 ± 0.49	32.03 ± 1.50

8.3 DPPH Radical scavenging assay: According to [29] the free radical scavenging activity was evaluated with the help of an improved DPPH assay. 2.7 mL (0.2 mM) DPPH solution was added to 0.3 mL of the extract of different concentrations. Then, the mixture was shaken efficiently and incubated at room temperature for 1 h in dark before the absorbance was taken at 517 nm.

Percentage inhibition = [(As − Ai)/As] × 100

Where, As is the absorbance of pure DPPH and Ai is the absorbance of DPPH in the presence of different extracts. Vitamin C was used as reference. *In-vitro* antioxidant potential and % inhibtion was depicted in table 8 and Figure 6.

Table 8: *In-vitro* antioxidant potential of *Phaseolus vulgaris* seed coat

IC_{50} value	**Concentration of Vitamin C (µg/ml)**	**Concentration of seed coat (µg/ml)**
	354.93 ± 7.37	429 ± 4.07

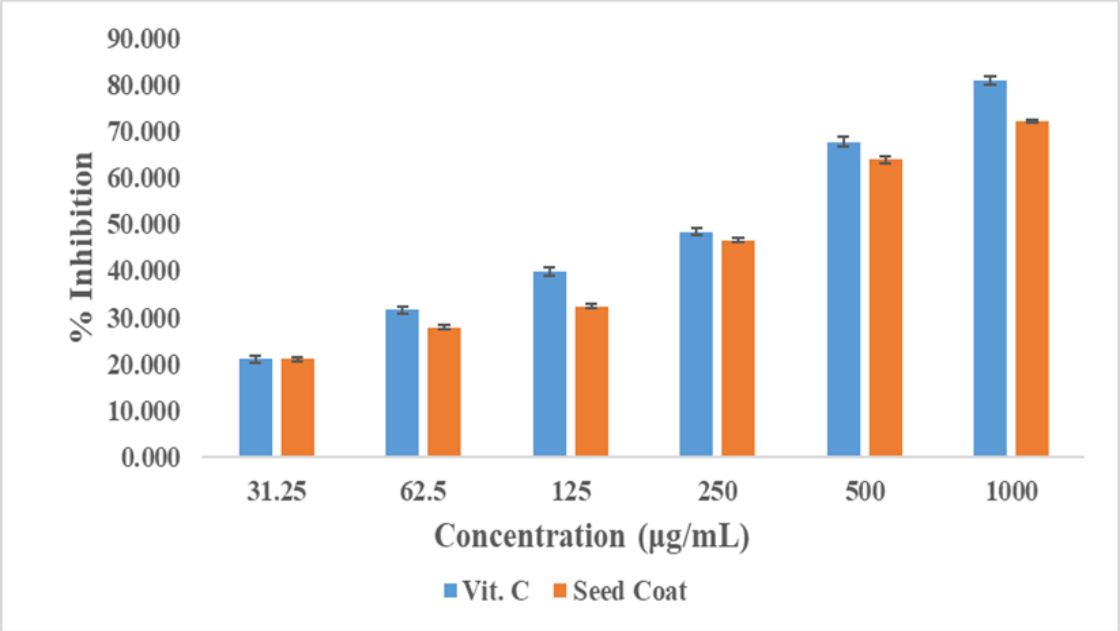

Figure 6: DPPH assay of*Phaseolus vulgaris* seed coat

9. RESULT AND DISCUSSION

- **Where are the results to be discussed?**
- **Where are the discussions?**

Medicinal plants are very useful and they have been used for more than hundred years by mankind in the prevention and treatment of numerous diseases [30]. From the above context, this study was designed to describe pharmacognostic profile and evaluated antioxidant activity of extract from *Phaseolus vulgaris*. To signify quality control profile, the initial step is macroscopy and microscopy study of any herbal or medicinal plant when used in pharmaceutical industry. [2] In this study we are discussed taxonomical classification, nutritional value in which plant seed contain higher amount of protein, lipids and carbohydrates and other essential components such as macro-minerals and micro-minerals, vitamins and dietary fibres [31].

This manuscript explains the morphology of red kidney bean as physical qualitative characterization, physical quantitative characterization and physico-chemical parameters. These physical characterizations of seed are significant for evaluating the product quality. The result for physical properties *i.e.* AMD, GMD, volume and surface area depends on axial dimension (length) of seed,

whereasphericity is depended on the lowest volume of the seed. Also, it helps various personals like plant breeders, machine manufacturers, food scientists, etc. Harvesting, grasping, shipment, detaching, aeration, examining, storing, filling and the other measurement prescribed machines and equipment and it is helpful to design relevant machine and equipment. Currently, there is no exclusive standard method is registered in prompting the physical dimensions of farming outcomes [32].

Microscopical examination of seed displayed three cell layers and showed the presence of proteinaceous cells, macro-sclerides and starch granule [33]. The highest percentage yield of hydroalcoholic extract of seed coat of *Phaseolus vulgaris* was obtained 58%. Phytochemical evaluation showed the existence of many bioactive compounds like alkaloids, glycosides, carbohydrates, tannins, saponin, steroids and several phenolic compounds such as flavonoids proteins. This study suggested hydroalcoholic extract of *Phaseolus vulgaris* have antioxidant potential owing to the presence of higher amount of phenol, flavonoids, saponins [34, 35]. In HPTLC, *Phaseolus vulgaris* exerted beneficial effects as compared with Quercetin as standard [36] and its Rf value was found 0.48.In antioxidant profile, higher value of total flavonoid and total phenol contents showed the presence of polyphenolic constituents and recommended its antioxidant action [37].Scavenging of DPPH is one of the imperative parameters to assess the antioxidant effect of crude extracts. In this study extract exhibited higher percentage of DPPH scavenging activity and the study suggested plant extract contain flavonoids and related polyphenols [38].

10. CONCLUSION

- In conclusion, written in a way that is not good at all.. It must be within (5-6 sentences) that summarizes the most important findings of the research in terms of directions for results and recommendations.

Phaseolus vulgaris serve as decisive source of protein, minerals, vitamins, dietary fibres. This study described morphology, microscopy, HPTLC and in-vitro bioactive compound estimation. On the basis of result it is suggested that *Phaseolus vulgaris* have antioxidant property. Previously, it is proposed that *Phaseolus vulgaris* contains flavonoids such as Quercetin, kaempferol, naringin, naringenin, ferulic acid, myrcetin and it is used as anti-diabetic, anti-inflammatory, anti-depressant, anti-parkinsonism, analgesic, anti-proliferative, cardio-protective, hepato-protective. As we know epilepsy may occur due to oxidative stress and these flavonoids are useful in the treatment of epilepsy so,

Phaseolus vulgaris could be beneficial in the treatment of epilepsy. In future, the present protocol may form the basis for the selection of plant species for further investigation in potent bioactive compounds for in-vivo activities.

The study highlights the efficacy of " Herbal " which is an ancient tradition, used in some parts of India. This ancient concept should be carefully evaluated in the light of modern medical science and can be utilized partially if found suitable.

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