CHAPTER I:INTRODUCTION

N,N-Dimethyltryptamine (DMT or N,N-DMT) or spirit molecule is a chemical substances that occurs in many plants and animals and which both a derivative and a structural analog of tryptamine. Tryptamines are naturally occurring alkaloids found in a variety of plants and life forms around the world and exist in > 1500 natural varieties. The basic element of tryptamine is the indole structure(Indole is an aromatic heterocyclic organic compound with a bicyclic structure, consisting of a six membered benzene ring fused to a five membered pyrole ring.) and tryptamine itself is an endogenous amine found in the human brain. Serotonin and Melatonin are two essential tryptamines present as neurotransmitters in the brain. Serotonin is found to affect or regulate a number of different functions in the body or brain from digestion to mood[2].Tryptamines can be also produced either completely synthetically or semisynthetically. Tryptamines is found in trace amounts in the brains of mammals and is hypothesized to play a role as a neuromodulator or neurotransmitters (transmits signals). Similar to other trace amines, tryptamines binds to human trace amine associated receptor 1 as an agonist (it is a chemical that binds to a receptor and activates the receptor to produce a biological response. Tryptamine is the common functional group in a set of compounds termed collectively substituted tryptamines[8].

DMT is a derivative of tryptamine with two additional methyl groups at the nitrogen atom. The chemical formula of N,N-Dimethyltryptamine(DMT) is C12H16N2. It can be consumed as a psychedelic drug and has historically been prepared by various cultures for ritual purposes as an entheogen. DMT is illegal in most countries. DMT has a rapid onset, intense effect and a relatively short duration of action. For those reasons, DMT was known as the “business trip”. It can be inhaled or injected and its effects depend on the dose[5]. When inhaled or injected the effects last

a short period of time that us about 15 to 20 minutes and maximum up to minutes based on the dosages and also depends upon the strength of the person. Effects can last three hours or more when orally ingested along with an MAOI, such as the ayahuasca brew of many native Amazonian tribes.DMT can produce vivid projections of mystical experiences involving euphoria and dynamic hallucinations of geometric forms. The various routes of administration of N,N-Dimethyltryptamines are inhalation, injection and oral administration[11].

Figure 1 : Ayahuasca Plant[11]

The psychotropic effects of DMT were first studied scientifically by the Hungarian chemist and psychologist Stephen Szara, who performed research with volunteers in the mid-1950s. DMT is generally not active orally unless it is combined with a monoamine oxidase inhibitor (MAOI) such as a reversible inhibitor of monoamine oxidase A (RIMA), for example harmaline. Other means of ingestion such as vaporizing, injecting, or insufflating the drug can produce powerful hallucinations for a short time(usually less than half an hour), as the DMT reaches the brain before it can be metabolized by the body's natural monoamine oxidase. It appears that DMT can produce a hallucinogenic experience. It can induce a state or feeling to a person

that he or she is able to communicate with other intelligent-life forms. High doses of DMT produce a hallucinatory state that involves a sense of another intelligence that people sometimes describe as super-intelligent but emotionally detached[6].

Figure2: N,N-Dimethyltryptamine[8]

In the 1990s, Rick Strassman and his colleagues conducted a five-year-long DMT study at the University of New Mexico. The results provided insight about the quality of subjective psychedelic experiences. In this study participants received the DMT dosage intravenously via injection and the findings suggested that different psychedelic experiences can occur, depending on the level of dosage. Lower doses (0.01 and 0.05 mg/kg) produced somaesthetic and emotional responses, but not hallucinogenic experiences (e.g., 0.05 mg/kg had mild mood elevating and calming properties)[12]. In contrast, responses produced by higher doses (0.2 and 0.4 mg/kg) researchers labeled as "hallucinogenic" that elicited "intensely colored, rapidly moving display of visual images, formed, abstract or both". Comparing to other sensory modalities the most affected was visual domain. Participants reported visual hallucinations, less auditory hallucinations and specific physical sensation progressing to a sense of bodily dissociation, as well as experiences of euphoria, calm, fear, and anxiety[8]. It appears that DMT can produce a hallucinogenic experience. It can induce

a state or feeling to a person that he or she is able to "communicate with other intelligent-life forms" (see "Machine Elves"). High doses of DMT produce a hallucinatory state that involves a sense of "another intelligence" that people sometimes describe as "super-intelligent", but "emotionally detached"[14].

DMT is commonly handled and stored as a fumarate, as other DMT acid salts are extremely hygroscopic and will not readily crystallize. Its freebase form, although less stable than DMT fumarate, is favored by recreational users choosing to vaporize the chemical as it has a lower boiling point. Dimethyltryptamine is an indole alkaloid derived from the shikimate pathway. Its biosynthesis is relatively simple and summarized in the adjacent picture [1]. In plants, the parent amino acid L-tryptophan is produced endogenously where in animals L-tryptophan is produced is an essential amino acid coming from diet. No matter the source of L-tryptophan, the biosynthesis begins with its decarboxylation by an aromatic acid decarboxylase(AADC) enzyme (step 1). The resulting decarboxylated tryptophan analog is tryptamine .Tryptamine then undergoes a transmethylation (step 2): the enzyme indole ethylamine –N-methyltransferase (INMT) catalyzes the transfer of a methyl group from cofactor S-adenosyl –methionine(SAM), via nucelophilic attack, to tryptamine. This reaction transforms SAM into S-adenosylhomocysteine (SAH), and gives the intermediate product N-methyltryptamine(NMT). NMT is in turn trans methylated by the same process (step3) to form the end product N,N-dimethyltryptamine. Tryptaminetransmethylation is regulated by two products of the reaction: SAH, and DMT were shown ex vivo to be among the most potent inhibitors of rabbit INMT activity[13].

N,N-Dimethyltryptamine in blood samples can be identified by using with Thin Layer Chromatographic(TLC) method .The densitogram (graph) of N,N-dimethyltryptamine will be at 220nm, that is at Rf value is 0.5+-0.01. The mobile phase resulted in a symmetrical and resolved peak at Rf value 0.5+-0.01. The

specificity of the method was evaluated by analyzing the standard and real samples. The band for DMT was confirmed by comparing the Rf value as well as the ultraviolet (UV) spectra of the band from the standards and samples. The peak purity of >0.099 indicated the specificity of the method, and there was no interference from any impurities in the separation and determination of the DMT peak. The linearity was established by the separation and the determination of the calibration curve. The constructed calibration plot was linear over the concentration ranges of 11.50to 32.25ug per band[11].

Retention factor(Rf value) is the fraction of an analyte in the mobile phase of a chromatographic system. The retention factor is also defined as the ratio of the distance traveled by the center of a spot to the distance traveled by the solvent front. The retention factor (Rf) can calculated by using the formula.

$$\text{Rf value} = \frac{\text{The distance traveled by the solution}}{\text{The distance traveled by the solvent}}$$

Forensic significance of this topic is now a days the usage of these types of drugs are increasing and mainly seeing in teenagers. One of the peculiarity of this DMT is when it is administrated in to our body, within half an hour it will get excreted. But in that half an hour the effect will be very high. It is having a double large effect than LSD but the time duration in very less. The main way of excretion is through urine and sweating. During the usages of this drug the person will be in hallucinogenic world, so illusions will occur and he/she may have different types of hallucinations and there by large sweating will occur. The identification of this DMT drug in blood is going on. It is identified only in urine and hair follicle. Because of the faster excretion process the traces of these drugs are not identified in blood.

My contribution to this related studies are I am collecting the blood samples of 10 persons who are using this DMT drugs. I will collect the samples from each person. The sample is taken from each person after one hour of the usage of drugs. The normal level of tryptamines range in our body is 4 -6μg /ml. There will be some changes in these ranges in every persons. If a person is using this drug then the tryptamines level will be in large range, that is it can be more than 20μg /ml .Then we can conclude that the persons is using this kind of drugs and level of tryptamines will be more in such persons and also such persons will be always in hallucinogenic world. Such persons will be always different from other persons. They will always feel sleepy. Because tryptamines are the substances in our body which will induce sleep.

CHAPTER II:LITERATURE REVIEW

Szara.S, (1956), "Dimethyltryptamine, its metabolism in man, the relation to its psychotic effect to the serotonin metabolism" by studies it is proved that Dimethyltryptamines (DMT) is an endogenous hallucinogen with traditional use as a sacrament in the orally active preparation of ayahuasca. Although the religious use of ayahuasca has been examined extensively, very little is known about the recreational use of DMT. In this study, Australian participants (n=121) reporting at least one lifetime use of DMT completed an online questionnaire recording patterns of use, subjective effects and attitudes towards their DMT use. Smoking DMT was by far the most common route of administration (98.3%) with a comparatively smaller proportion reporting use of ayahuasca (30.6%). The reasons for the first trying DMT were out of a general interest in hallucinogenic drugs(46.6%) or curiosity about DMT's effects(41.7%), while almost one third (31.1%) cited possible psychotherapeutic benefits of the drug. An increase in psychotherapeutic benefits of the drug. An increase in psychospiritual insight was the most commonly reported positive effect of both smoked DMT (75.5%) and ayahuasca (46.7%), a finding that is consistent with other studies examining the ritualized use of ayahauasca in a religious context. Although previous studies of DMT use have examined ayahuasca use exclusively, the present study demonstrates the ubiquity of smoking as the most prevalent route of administration among recreational DMT users.

Franzen F; Gross H, June (1965) "Tryptamines, N,N -dimethyltryptamine, N,N-dimethyl-5-hydroxytryptamine and 5-methoxytryptamine in human blood and urine" by studies it is proved that Tryptamine is a normal constituent of human urine 1-5; about 30-120μg of the amine are expected per 24h. In blood, tryptamine has hither to been demonstrated only qualitatively and under pathological conditions in a carcinoid patient 6. There is no information about an occurrence of N,N-dimenthyltryptamine

in human beings. N,N-dimethyltryptamine-5-hydroxytryptamine (Bufotenin) was demonstrated qualitatively as a constituent of normal human urine 4, 7; in children an excretion of 0-0.03μg amine/100mg creatinine has been found with, at most, semi-quantitative methods. Apparently, N,N-dimethyl-5-hydroxytryptamine was still not demonstrated in blood. 5-Methoxytryptamine has been found in the urine of patients with rheumatic fever 8, and that in an order of magnitude of 30-210μg/24h.

Barker S. A Monti J. A Christian S.T (1981) "N,N-dimethyltryptamine: an endogenous hallucinogen. International Review of neurobiology" this studies reviews the biosynthesis, metabolism, pharmacology and properties of N,N-dimethyltryptamine (DMT), leading to a conclusion that DMT may be a neurotransmitter in the mammalian brain. The identification of DMT and other hallucinogens in man explains the experience of hallucinatory phenomena in general. Data is presented in the chapter to illustrate that DMT is a normal constituent of mammalian brain and other tissues. Enzymes capable of synthesizing DMT from tryptamine (TA) and –N-methyltransfera(NMT) are also described. These enzymes are apparently controlled by small peptide- like compounds as well as by feedback inhibition from substrate and product. A cyclic metabolic pathway for DMT is offered. There is also evidence that DMT is taken up into synaptosomes and stored in vesicles by mechanisms identical to those described for known neurotransmitter substances. Specific binding sites for DMT are suggested and DMT is shown to lead to the production of cyclic adenosine monophosphate (cAMP), a secondary receptor messenger. As evidence of its electrophysiological activity, it has been shown that, DMT stimulates fluid secretion from the salivary glands of blowflies, changes the transepithelial and intracellular potential of the gland and increases the production of cAMP. Thus, DMT fulfills the criteria for consideration as a neurotransmitter or a neuromodulator.

Mckenna, Dennis J, et.al. (1984) "Monoamine oxidase inhibitors in South American halluciongenic plants: Tryptamines and B-carboline constituents of ayahuasca. Journal of Ethno pharmacology" it is proved that Ayahuasca is a hallucinogenic beverage derived by boiling the bark of the Malpighiaceous liana Bunisteriopsiscaapi together with the leaves of various admixture plants, viz. Psychotriaviridis, Psychotriucarthugenensis, or Diplopteryscabrerana. Bunisteriopsiscaapi contains harmine, harmaline, and tetrahydroharmine while the admixtures contain NJ-dimethyltryptamine(DMT). DMT a potent hallucinogens, is inactive orally due to degradation by visceral monoamine oxidase(MAO).The P-carbolines, however are highly active reversible inhibitors of MAO and may protect the DMT from deamination by MAO and render it orally active. This mechanism has been proposed to underlie the oral activity of ayahuuasca but has not been experimentally confirmed. In the present study the constituents of the admixture plants and the alkaloids of eight ayahuusca samples from Peru were qualitatively and quantitatively analyzed using two-dimensional thin layer chromatography (TLC) high pressure liquid chromatography(HPLC) and gas chromatography/mass spectrometry(GC/MS).

Barker S.A Little field, et.al. (2001) "Distribution of the hallucinogens N,N-dimethyltryptamine and 5-methoxy-N,N-dimethyltryptamine in rat brain following intraperitoneal injection application of a new solid-phase extraction LC-APCL-MS-MS-isotope dilution method" by studies it is proved that solid-phase extraction (SPE) and liquid chromatographic atmospheric pressure chemical ionization-mass spectrometric-mass spectrometric-isotope dilution(LC-APcI-MS-MS-ID) analysis hallucinogens N,N-dimethyltryptamines(DMT) and 5-methoxy DMT(or O-methyl bufotenin, OMB)from rat brain tissue is reported. Rats were administrated DMT or OMB by the intraperitoneal route at a dose of 5 mg/kg and sacrificed 15 min post treatment. Brains were dissected into discrete areas and analyzed by the methods described as a demonstration of the procedures applicability. The synthesis and use of two new deuterated internal standards for these purposes are also reported.

Strassmann R. J (2001) “DMT: The spirit molecule. A doctor’s revolutionary research into the biology of Near- Death and mystical experiences” by studies it is proved that a clinical psychiatrist explores the effects of DMT, one of the most powerful psychedelics known. A behind the scenes look at the cutting edge of psychedelic research. Provides a unique scientific explanation for the phenomenon of alien abduction experiences. From 1990 to 1995 Dr. Rick Strassman conducted US Government approved and funded clinical research at the university of New Mexico in which he injected sixty volunteers with DMT, one of the most powerful psychedelics known. His detailed account of those sessions is an extraordinarily riveting inquiry into the nature of human mind and the therapeutic potential of psychedelics. DMT, a plant derived chemical found in the pyschedelic Amazon brew, ayahuasca, is also manufactured by the human brain. In Strassman’s volunteers, it consistently produced near death and mystical experiences. Many reported convincing encounters with intelligent non-human presences, aliens, angels, and spirits. Nearly all felt that the sessions were among the most profound experiences of their lives. Strassman’s research connects DMT with the pineal gland, considered by Hindus to be the site of the seventh chakra and by Rene Descartes to be the seat of the soul. DMT: THE SPIRIT MOLECULE makes the bold cases that DMT, naturally released by the pineal gland, facilitates the soul’s movement in and out of the body.

Luke D. (2011) “Journey of the society for physical Research Discarnate entities and DMT : Psychopharmacology , Phenomenology and ontology” by studies it is proved that the highly psychoactive molecule dimethyltryptamine(DMT), is found naturally occurring in the brains of humans, mammals, and some other animals, as well as in a broad range of species of the plant kingdom. Although speculative, neurochemical research suggests that DMT may be made in the pineal gland, and it is hypothesised that, as much as melatonin helps active sleep cycles, DMT activates-dreaming, and may also be implicated in other natural visionary states such as mystical experience, near-death experience(NDE), spontaneous psi and psychosis. Amazonian shamans

may have made use of this chemical for its visionary properties for thousands of years, and take it as part of a decoction frequently called ayahuasca, which translates from Quechua as vine of spirits or vines of the dead. The psychedelic brew is taken because it gives rise to extraordinary mental phenomena that have shamanic and supposed healing qualities, such as synesthesia, ostensible extra-dimensional percepts, out-of-body experiences, psychic experiences and, perhaps most commonly, encounters with discarnate entities.

Andrew R Gallimore (2013) "A journal of scientific exploration 27(3): Building alien worlds the neuropsychological and evolutionary implication of the astonishing psychoactive effects of DMT" by studies it is proved that the property of the human brain is its ability to construct the world that appears to consciousness. The brain is capable of building world during waking life, but also in the complete absence of extrinsic sensory data, entirely from intrinsic thalamocortical activity, as during dreaming. DMT, an extraordinary psychedelic, perturbs brain activity such that indescribably bizarre and apparently alien worlds are built. This property of DMT continues to defy explanation. However, by regarding this unique molecule as equivalent to serotonin, an endogenous neuromodulator with a long-standing relationship with the brain, DMT's effects may be explained. Serotonin has evolved to hold the brain's thalamocortical system in a state in which the consensus world is built. This suggests that DMT may be an ancestral neuromodulator, at one time secreted endogenously in psychedelic concentrations- a function apparently now lost. However, DMT maintains a number of unique pharmacological characteristics and a peculiar affinity with the human brain that supports this model. Thus, the modern practice of ingesting exogenous DMT may be the reconstitution of an ancestral function.

Andrew R Gallimore, et.al.(2015) "Neurotransmissions-An Anthology of essays on psychedelics from Breaking convention, DMT research from 1956 to the edge of time" from a representative sample of a suitably psychedelic crowd, you'd be hard pressed to find someone who couldn't tell you all about Albert Hofmann's enchanted bicycle ride after swallowing what turned out to be a massive dose of LSD-the world's first acid trip(Hofmann, 1980) has since become a cherished piece of psychedelic folklore. Far fewer, however, could tell you much about the world's first DMT trip. Although less memorable than Hofmann's story, it was no less important. The folklore would come later and reveal itself to be far weirder than anyone could have predicted. A DMT trip is certainly one of the most bizarre experiences a human can undergo and, although six decades have passed since the very first DMT trip, the experiences continues to confound and remains fertile ground for speculation regarding its significance and meaning. Of course, it would be extremely Western-centric to ignore the use of DMT by indigenous Amazonians in the ayahuasca brew(Shanon,2003; Frenopoulo,2005;Schmidt,2012) or the cohoba snuff (Schultes, 1984), but it was only after the effects of the pure compound were discovered that its role in these traditional preparations became clear.

Graham st John (2017) "The DMT gland, the pineal, the spirit molecule and popular culture" a series of studies examined the long term personal and spiritual significance of exposure to psilocybin and others have suggested that psilocybin may be useful for anxiety related disorders. Similarly, ayahuasca and similar DMT containing mixtures have been proposed as treatments for a variety of psychiatric disorders and ayahuasca is mostly well- tolerated. For example, long term ayahuasca users showed less psychopathology, and better performance on neuropsychological tests compared to matched controls and less substances abuse and fewer psychiatric/psychosocial problems than matched controls. Subsequent research reported that levels of endogenous DMT increased in schizophrenic patients during psychotic episodes, which declined as their state improved. However, no change in DMT levels were

observed in rapidly cycling states. These findings renewed interest in the transmethylation hypothesis, which states that schizophrenia may be due to stress induced production of psychotomimetric methylated derivatives ofcatecholamines or indolealkylamines in the brain. DMT seems to fits the bills as it is an indoleakylamine, is an endogenous compound, and is linked to stress reactivity. Few studies have investigated the effects of DMT containing compound on depression. One study investigated the effects of ayahuasca in the forced swim test, a common animal model of depression. In female Wistar rats ayahuasca increased swimming, which is considered a sign of potential antidepressant effects.

CHAPTER III:AIMS AND OBJECTIVES

AIM:

To identify the presence of N,N-dimethyltryptamine(DMT) a hallucinogenic drug in blood samples by using Narco Check Id Kit and Thin Layer Chromatography(TLC) method.

OBJECTIVE:

- To investigate the blood sample for qualitative analysis of drugs.
- To identify the presence of tryptamine by using Narco check kit.

CHAPTER IV:MATERIALS AND METHODOLOGY

MATERIALS REQUIRED

APPARATUS:

- Syringes
- Glass phials.
- Narco check Id test kit
- Micropipettes
- Thin Layer Chromatographic scanner(CAMAG®TLC SCANNER VERSION 4)
- WinCATS software (Windows CATENARY Software)

REQUIREMENT:

- Silica Gel
- Methanol
- Ammonia

METHODOLOGY

Ten blood samples were collected from the persons which contains the presence of N,N-Dimethyltryptamines. The blood samples were collected from the persons who were used the N,N-Dimethytryptamine (DMT) before 1 hour. From the collected blood samples take 1-3 drops of blood were taken from each samples. Added the blood samples by drop wise in to Narco Check Id Kit ampoule for the identification of tryptamines in blood samples. The ampoule was tied and shaked well. After one minute the ampoule changed its colour to purple. A coloured leaflet was there for comparing the colour change. A purple colour change, indicates the presence

of N,N-Dimethyltryptamine(DMT) in blood samples. Once the colour was changed then we can go for analytical method.

Thin Layer Chromatography (TLC) method is the analytical method which was used for the identification of presence of N,N-dimethyltryptamine(DMT) in blood samples. The reagents which are prepared for the identification of DMT are methanol, ammonia and silica gel. The preparation of methanol and ammonia are in the ratio of 100:1:5 for mobile phase and preparation of silica gel phase for stationary phase are in 10x10cm.The presence of tryptamines was detected from this chromatographic method . The analysis was performed on 10x10cm precoated silica gel F 254 plates, which was previously activated at 80ºc for 20 minutes. One microliter of samples was applied in bands of 4mm with an ATS 4 automatic TLC sampler, using a spray band technique. The first application of samples was conducted by considering the silica gel plates in x and y axis. The samples were placed in both the x and y axis. In x axis it was at a distance of 10mm and in y axis it was at a distance of 8.0mm. The distance between the sample tracks was at 4.2mm. Plates were developed with an automatic developing chamber ADC-@ without saturation to a distance of 70nm, with methanol-ammonia 100:1.5 as the mobile phase and drying time of 2.0 min. The spots were scanned with the TLC scanner 4 densitometer by absorbance

Figure 3: TLC scanner[16]

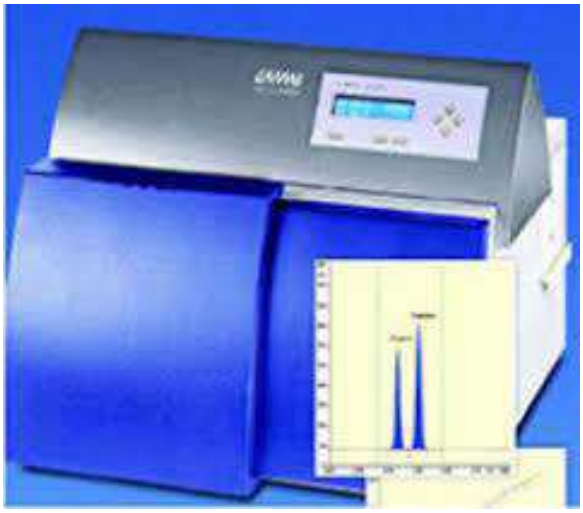


Figure 4: TLC scanner with the graph of Rfvalue[16]

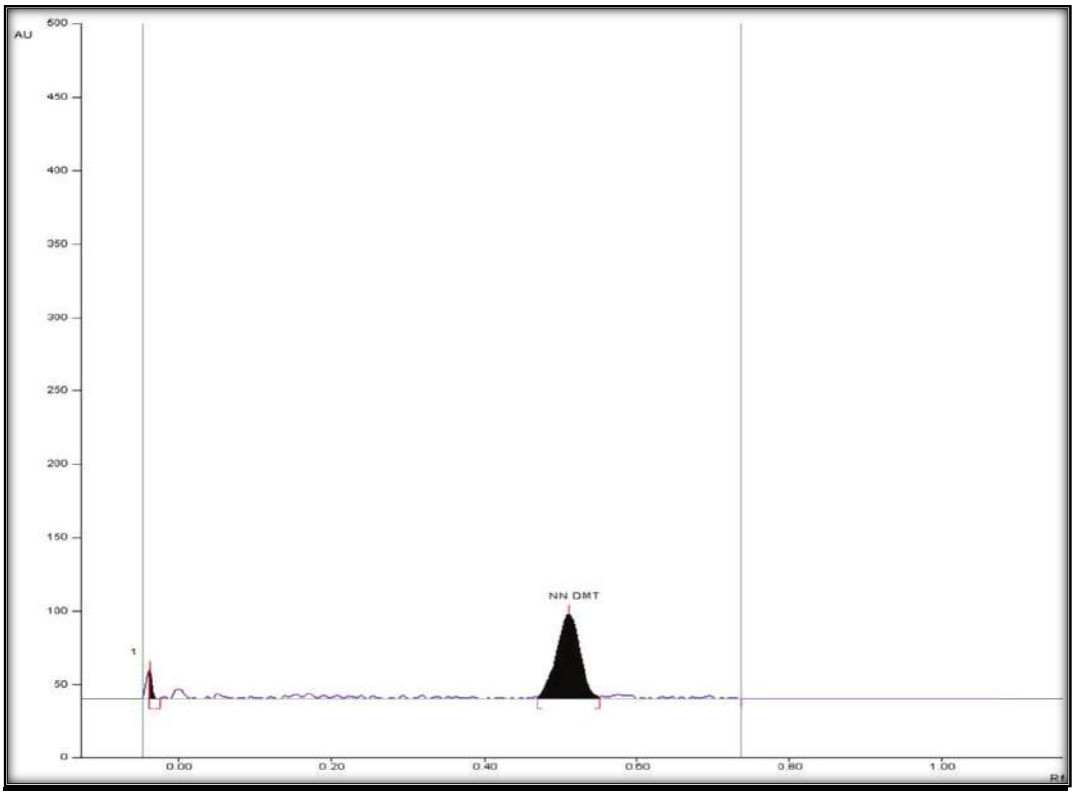
Spectra of each peak were recorded in the range of 190-400nm on all detected peaks mode, slit dimension, 4.00x 0.30nm; scanning speed 20 nms-1;data resolution, 100um step-1, reference spectrum, x= 10.0m and y= 5.0mm.

All the process were controlled with the software winCATSPlanar chromatography Manager, version 1.4.7. The specificity of the method was evaluated by analyzing the standard and real samples. The band for DMT was confirmed by comparing the Rf value as well as the ultraviolet(UV) spectra of the band from the samples. The precision (repeatability) of the method was examined by analyzing three replicates of one sample in the same plate by the same analyst on the same day. Intermediate precision was analyzed by injecting the same sample in three different days in different concentrations by the same analyst. The accuracy was determined on the basis of standard addition performed by adding the known amount of standard powder of DMT was added and then analyzed by the proposed method.

The distance traveled by the solute and solutions were calculated and by that calculation the Rf value of the samples were noted. A densitogram was occurred in the

graph when the sample gave the positive result, i.e. the sample was contained with 0.5+-0.1 Rf value.

CHAPTER V:CALCULATIONS AND OBSERVATION



Graph No 1: The Rf value of DMT at 0.5

OBSERVATION TABLE 1:

SL No	Samples	Rf values	Linearity	Result
1	Sample 1	0.5	Between 11.50 to 34.25µg band-1.	Positive
2	Sample 2	0.68	>11.50 to 34.25µg band-1.	Negative
3	Sample 3	0.28	<11.50 to 34.25µg band-1.	Negative
4	Sample 4	0.7	>11.50 to 34.25µg band-1.	Negative
5	Sample 5	0.6	Between 11.50 to 34.25µg band-1.	Positive
6	Sample 6	0.65	>11.50 to 34.25µg band-1.	Negative
7	Sample 7	0.55	>11.50 to 34.25µg band-1.	Negative
8	Sample 8	0.49(0.5)	Between 11.50 to 34.25µg band-1.	Positive
9	Sample 9	0.52	>11.50 to 34.25µg band-1.	Negative
10	Sample 10	0.67	>11.50 to 34.25µg band-1.	Negative

Table 1: Observation Table For Rf Value of Blood Samples.

CHAPTER VI:RESULT AND CONCLUSION

RESULT:

All the ten samples are analyzed by using with the preliminary test Narco Check Id Kit. During the preliminary examination of sample the blood drops are added to the ampoule and within one minute the colour of blood is changed to Purple. This indicates the presence of N,N-Dimethyltryptamines in blood samples. After the preliminary examination all the ten samples are analyzed under the Thin Layer Chromatographic method and we got the Rf value of all the samples. The densitogram (graph) of DMT is at 220 nm and the Rf value of 0.5+-0.1. The linearity of DMT is in between 11.50 to 34.25µg band-1. If the band is getting more than 34.25 or less than 11.50 then it will not be DMT. The Win CATS software will automatically calculated the Rf values of the samples and it will gives the graph of the samples if it is having the Rf value of 0.5 and its showing that the sample is containing the presence of DMT.

In the 1st sample, the Rf value is 0.5 and it is having the linearity between 11.50 to 34.25µg band-1. So the sample is containing the presence of DMT drug and hence it is proved as positive. The 2nd sample containing the Rf value of 0.68 and it is having the linearity greater than 11.50 to 34.25µg band-1. So it is not containing the presence of DMT and hence it is proved as negative. The 3rd sample is having the Rf value of 0.28 and having the linearity less than 11.50 to 34.25µg band-1. So it is not containing the presence of DMT and hence it is proved as negative. The 4th sample contain with the Rf value of 0.7 and having the linearity of greater than 11.50 to 34.25µg band-1. So it is not having the presence of DMT and hence it is proved as negative. The 5th sample is having the Rf value of 0.6 and it is having the linearity between 11.50 to 34.25µg band-1. So it is having the presence of DMT and hence it is

proved as positive. The 6th sample contain the Rf value of 0.65 and having the linearity greater than 11.50 to 34.25µg band-1. So it is not containing the presence of DMT and hence it is proved as negative. The 7th sample is having the Rf value of 0.55 and it is having linearity greater than 11.50 to 34.25µg band-1. So it is not containing any presence of DMT and hence it is proved as negative. The 8th sample is having the Rf value of 0.49 ie 0.5 and it is having the linearity of linearity between 11.50 to 34.25µg band-1. So it is having the presence of DMT and hence it is proved as positive. The 9th sample is contained the Rf value of 0.52 and having the linearity greater than 11.50 to 34.25µg band-1. So it is not containing any presence of DMT and hence it is proved as negative. The 10th sample is having the Rf value of 0.67 and having the linearity greater than 11.50 to 34.25µg band -1. So it is not contain any presence of DMT drug and hence it is proved as negative. In the analyzed ten samples, only three samples are containing the presence of DMT and the remaining are not having the presence of DMT.

CONCLUSION:

By analyzing ten sample only three samples are positives and the remaining seven samples are negative.

The presence of DMT in blood traces are very difficult to identify and these traces in the body will be depends upon the health of the person and condition. The chances of getting positive result increase by collecting the blood samples after half an hour of the ingestion of a drug. As the usage of DMT drugs are increasing day by day so it is necessary to detect the presence of drugs in short period of time.

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