

Nodemcu Based Overdose Analyzer Using Iota

INIYA.B, LAKSHMI PRABHA.S

Department Of Computer Science , Sri Sairam Engineering College Chennai

ABSTRACT

Advanced pill is essentially a multichannel sensorutilized for far off biomedical estimations utilizing miniature innovation. This is utilized for the constant estimation boundaries like conductivity and broke down oxygen. The sensors are manufactured utilizing electron bar and photolithographic design combination and were constrained by an Application Specific Integrated Circuit (ASIC).Digital pills are ingestiblescaled down electromechanical gadgets addressing a state of union between biomedical innovation, medication and the pharma business. Swallow capablebrilliant pills for drug conveyance are getting expanding consideration as the oral one is as yet theliked course for drug organization, because of its high quiet acknowledgment and minimal effort. The progressions happen in human bodies are checked andsent it to close screen for specialist observing throughremote. In this paper, we proposed a Nodemcu basedhuman body portion analyzer utilizing iot.

KEYWORDS: Digitalpill, Valproatesensor, Nodemcu, Arduino UNO, limitus sheet

INTRODUCTION

Computerized pill is essentially a multichannel sensor utilized for far off biomedical estimations utilizing miniature

innovation. This is utilized for the continuous estimation boundaries like temperature, pH, conductivity and broken down oxygen. The sensors are manufactured utilizing electron bar and photolithographic design incorporation and were constrained by an application explicit incorporated circuit (ASIC). Computerized pills are ingestible scaled down electromechanical gadgets addressing a state of assembly between biomedical innovation, medication and the pharma business. Gadgets, sensors and small scale mechanical innovation can give access, investigate and control the body from within. Specifically, keen pills for drug conveyance are an arising innovation; various ways to deal with nearby medication conveyance have been proposed, including transcutaneous and

implantable implies. At any rate, swallow capable savvy pills for drug conveyance are accepting expanding consideration as the oral one is as yet the liked course for drug organization, because of its high quiet acknowledgment and minimal effort. Keen pills for drug conveyance offer various huge freedoms for drug enterprises since they might be utilized in a wide scope of utilizations and empower treatments impractical with regular methods. its high tolerant acknowledgment and minimal effort. Shrewd pills for drug conveyance offer various huge freedoms for drug enterprisessince they might be utilized in a wide scope of uses and empower treatments impractical with customary methods. The progressions happen in human bodies are observed and sent it to close screen for specialist checking through remote.

SCOPE

Savvy pills for drug conveyance offer various huge freedoms for drug ventures since they might be utilizedin a wide scope of applications and empower treatments unrealistic with customary methods. its high patient acknowledgment and ease. The progressions happen in human bodies are checked and sent it to close specialist for observing through remote.

EMBEDDED SYSTEMS

An inserted framework is a unique reason PC framework planned

to perform one or a couple of committed capacities, regularly with ongoing figuring imperatives. It is normally implanted as a feature of a total gadget including equipment and

mechanical parts. Conversely, a broadly useful PC, like a PC, can do various undertakings relying upon programming. Inserted frameworks have become vital today as they control a considerable lot of the basic gadgets we use. Since the inserted framework is devoted to explicit errands, plan architects can improve it, decreasing the size and cost of the item, or expanding the unwavering quality and execution. A few inserted frameworks are masscreated, profiting by economies of scale. Actually, inserted frameworks range from convenient gadgets like advanced watches and MP3 players, to huge fixed establishments like traffic signals, plant regulators, or the frameworks controlling thermal energy stations. Intricacy differs from low, with a solitary microcontroller chip, to exceptionally high with various units, peripherals and organizations mounted inside an enormous undercarriage or then again fenced in area. As a rule, "inserted framework" is certainly not a precisely characterized term, as numerous frameworks have some component of programmability. For example, Handheld PCs share a few components with installed frameworks - like the working frameworks and microchips which power them — however are not genuinely installed frameworks, since they permitvarious applications to be stacked and peripherals to be associated. Implanted frameworks give a few capacities Screen the climate: implanted frameworks read information from input sensors. This information is then prepared and the outcomes showed in some configuration to a client or clients Control the climate:installed frameworks produce and send orders for actuators. Change the data: installed frameworks change the information gathered in some significant manner, like information pressure/decompression Despite the fact that communication with the outer world by means of sensors and actuators is an significant part of implanted frameworks, these frameworks likewise give usefulness explicit to their applications. Installed frameworks normally execute applications for example, control laws, limited state machines, and sign preparing calculations. These frameworks should likewisedistinguish and respond to issues in both the inward figuring climate just as the encompassing electromechanical frameworks.

There are numerous classifications of implanted frameworks, from specialized gadgets to home machines to control

frameworks. Models include:

- Communication gadgetse.g.: modems, cells
- Home Appliances
- e.g.: CD player, VCR, microwave
- Control Systems

e.g.: Automobile electronically monitored slowing mechanisms, advanced mechanics, satellite control

LITERATUR SURVEY

Application of Image Processing for Inspectionof Pill Production Process

Examination of the outside appearance of the pill is one of the techniques to check the essential quality as indicated by the normof Food and Drug Administration (FDA) like chipped pills, impropersizes, and indistinct letter imprinted on pills. This paper proposes a utilization of picture handling for investigation of pill

creation measure. In this examination, the ImageProcessing chief including the

Grayscale Method, Threshold Method, OTSU Method,

Bounding Box Method

what's more, Geometric Algorithm was embraced to handle pictures from ordinary webcam camera. Moreover, the Microsoft Visual C# 2008 was utilized for handling the flags by investigating the yield signsof webcam camera. In the examination, the

wonderful pill was dictated by a cross-sectional region at least 98% of the standard pill in units of milligrams (mg) in FDA standard. The test was partitioned into three cases: examination 100 amazing pills, 100 defective pills and 100 pills in 1:1 proportion between the ideal pills and the blemished pills with the speed for examining and recognizing of 70 pills each moment. From the trial

consequence of three cases, the blunder rates were 0.6%, 1.2% and 1.0%, separately, while the normal of interaction blunder was 0.93%.

A BROADBAND LOW-LESS PILL

BOX WINDOW

To grow wide-band low-misfortune windowfor W-band vacuum electronic gadgets, a deviated pill-confine window is researched this paper. The introduced cushion box window is made out of standardwaveguide, round waveguide, and sapphire dielectric window. As indicated by the same circuit hypothesis, starting boundaries for the awry pill-box window is planned. 3-D

electromagnetic PC code CST is utilized to check and advancethe plan. Via cautiously controlling the mistakes in machining, gathering, and brazing measure, a model test is produced and test. The test outcomes show that the \pmbS21 is between the recurrence scope of 76-110 GHz. The hole pace of the window framework is 1.2E-10 Pa.m 3 /sec.

Crystal-Less MICS Transceiver Featuring Coverages of ±160ppm Carrier Frequency Offset and 4.8-VSWR Antenna Impedance for Insertable Smart Pills

Gastroscopy is a typical conclusionstrategy for gastrointestinal (GI) illnesses, however it should be acted in medical clinics. Existing ingestible pills can gather patients' GI data over a more extended period outside of a clinic, and different sensors can be fused to gather more data. Notwithstanding, ingestible pills passing through the GI framework can't make long accounts in explicit spots of interest. New gastroscope research centers around the utilization of the biopsy channel of an addition cylinder to connect the pill on aparticular surface of the GI lot for quite awhile before it disengages itself [1]. Quitepossibly the most difficult pieces of such "insertable" pill configurationis the volume requirement. The biopsy diverts in gastroscopes have a distance across of

 \sim 3.5mm (in any event 3x not exactly existing pills), and the length of the non-bendable part ought to be <; 15mm (Fig30.8.1). Since the pill is at placesconcealed by to 15cm of tissue, a remote framework working in the 402-to- 405MHz MICS band is ideal due to bringdown tissue weakening contrasted withhigher recurrence groups, e.g., 2.4GHz. Itlikewise gives a

outcorrespondence distance more drawn and more extensive sign data transfer capacity contrasted with close field correspondence frameworks [2]. At last, the impedance control in MICS guarantees the inserts having an obstruction free channel. In any case, the volume requirement presents criticalchallenge for a MICS handset plan since outer segments ought to be kept away from, and it interfaces with an electrically little ((10) radio wire which has high affectability to the general climate. A precious stone less handset is liked since the gem is commonly the greatest off-chippart. A mm-scale radio in replaces thegem with a FBAR however requires an uncommon assembling measure. A mm- scale gem free radio in introduced an organization helped timing synchronization for its Heartbeat Position-Modulation(PPM)based framework. Be that as it may, handsets working in MICS should cling to a transporter dependability better than ± 100ppm which orders transporter synchronization for precious stone free activity, and it is particularly basic for FSK/PSK handsets that are liked in MICS for their better channel selectivity and obstruction versatility. Force oscillator geographies [5] have been broadlyembraced in late mm-scale radios inferable from their little size and high effectiveness. In any case, the outer loop impedance variety because of the direct contact of tissues can impact the transporter soundness of the force oscillator, and the power oscillator can'tbe reconfigured as a LO for FSKIPSK- based RXs.

Smart Pill Box System for Bipolar Disorder Patients

The principle reason for the Smart PillBox System project is assisting patients with bipolar turmoil or different ailments to make their inspiration to take medication. Besides, guardians can deal with the patients all the more advantageously. Patients can utilize the application to arrangement the warning time for drug. At that point the application will send the current worth to the pillbox framework. The application will give a ready when the time has come to take the medication. Furthermore, when patients pick up themedication from the pillbox framework,

they will get focuses which will address by the developing tree. By and by, if the patient doesn't get the medication inside restricted time, a warning will be shipped off the parental figure to make further moves.

Computer-Aided GastrointestinalDiseases Analysis From Wireless Capsule Endoscopy

The consistent upgrades in the space of clinical imaging, makes the patient checking a pivotal concern. The web of things (IoT) inserted in a clinical innovations to gather information from human body through sensors, remote network and so forth The intersection of medication and IT like clinical informatics will change medical care, checking cost, make more proficient, and saving lives. Different

modernizedstrategies are executed in the space of Artificial Intelligence (Man-made intelligence) for the use of clinical imaging to analyze the contaminated locales in the pictures and recordings like WCE and pathology. The well known stomach contaminations are ulcer, polyp, and dying. Stomach disease is the most well-known contamination and a main source of human passings around the world. In the USA, since 2019, an aggregate of 27,510 new cases are accounted for including 17,230 men and 10,230 ladies. While the quantity of passings is 11,140 comprises of 6,800 men and 4,340 ladies. The manual conclusion of these stomach diseases is a troublesome and unsettled interaction accordingly it is needed to plan a completely mechanized framework utilizing AI. In this article, we introduced a completely robotized framework for stomach disease acknowledgment dependent on profound learning highlights combination furthermore, determination. In this plan, ulcer pictures are allocated physically and backing to a saliency-based technique for ulcer identification. Afterward, pre-prepared profound learning model named VGG16 is utilizing and re-prepared utilizing move learning. Highlights of re-prepared model are removed from two successive completely associated layers and melded by exhibit based methodology. Plus, the best people are chosen through the metaheuristic approach name PSO along mean worth based wellness work. The chose people are at last perceived through Cubic SVM. The examinations are directed on Private gathered dataset and accomplished an exactness of 98.4%, which is best when contrasted with existing cutting edge methods

EXISTING SYSTEM

The ceaseless enhancements in the space of clinical imaging, makes the patient observing a vital concern. The web of things (IoT) implanted inclinical advancements to gather information from the human body through sensors, remote availability and so on The intersection of medication and IT like clinical informatics will change medical services, controling cost, make moreproductive, and saving lives. Different automated methods are carried out in the space of Man-made consciousness (AI) for the utilization of clinical imaging to analyze the tainted locales in the pictures and recordings like WCE and pathology. The acclaimed stomach diseases are ulcer, polyp, and dying. Stomach malignant growth is the most widely recognized contamination and a main source of human passings around the world. In the USA, since 2019, an aggregate of 27,510 new cases are accounted for counting 17,230 men and 10,230 ladies. While the quantity of passings is 11,140 comprises of 6,800 men and 4,340 ladies. The manual determination of these stomach diseases is a troublesome and unsettled framework cycle accordingly it is needed to plan acompletely computerized utilizing AI. In this article, we introduced a completely mechanized framework forstomach contamination acknowledgment based on profound learning highlights combination and choice. In this plan, ulcer pictures are alloted physically and upheld to a saliency-based strategy forulcer recognition. Afterward. а preprepared profound learning model namedVGG16 is utilized and re-prepared utilizing move learning. Highlights of the re-prepared model are extricated from two successive completely associated layersand combined by cluster basedmethodology. Plus, the best people arechosen through

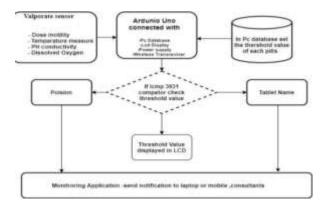
the metaheuristic approach name PSO along mean worth based wellness work. The chose peopleare at last perceived through Cubic SVM.The tests are led on Private gathered dataset and accomplished an precision of 98.4%, which is best when contrasted with existing best in class procedures.

INDEX TERMS : Stomach diseases, WCE, saliency estimation, deep learning, features selection, features classification.

PROPOSED SYSTEM

In this work, a model of implantable computerized pill will be planned. It tends to be utilized for the realtime estimation boundaries like fixation, pH, conductivity and broke up oxygen of the devoured food. It will be robotized and we can get an update in a flash through message at the hour of burning-through food. These all informations are put away in cloud. The pills ceaselessly screen our stomach pH level, blood pH. It sends message about the body pH levels. AI is a component utilizing to foresee and break down the information's about on food fixings. These all informations are send through ZigBee which has been associated with microcontroller. Along these lines, every one of the subtleties are put away and shown. The model of computerized pill dependent on web ofthings(IoT) has been created to screen the gastro intestinal piece of the body and to screen the body's boundaries utilizing IoT.

ARCHITECTURE DIAGRAM



The main block of the diagram consists of Valproate sensor , Nodemcu , display , zigbee receiver.

Valproate sensor

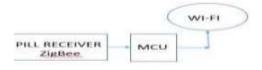


A valproate sensor is a gadget that measures the hydrogen-particle fixation in an answer, showing its corrosiveness or then again alkalinity. As well as estimating the ph of fluids broke up. The valproate of an answer shows how acidic or essential (basic) it is. The valproateterm interprets the estimations of the hydrogen particle focus which commonly goes between around 1 and 10 x - 14- gram reciprocals per liter - into numbers somewhere in the range of 0 and 1.

It comprises of two terminals with ZigBee transmitter that communicates the sign to the recipient through ZigBee. It is a pill model with variable lithium battery of 3V.The anodes X ,Y directs and gauges the pH and convey the message to the beneficiary. It is furnished with on and offswitch for the working.

ZIGBEE RECIEVER

ZigBee is the ideal decision of convention for robotization and brilliant energy, on the grounds that distinctive ZigBee gadgets can be associated. As more ZigBee gadgets are connected, correspondence ways between gadgets duplicate, disposing of the danger of single-point signal disappointment. ZigBee is an open, worldwide norm for remote correspondence between IoT gadgets. With ZigBee, IoT gadgets can without much of a stretch be associated with other IoT gadgets. The ZigBee convention is secure and stable, which is one reason why it has gotten one of the world's most generally embraced conventions.



NODE MCU

The All new Node MCU ESP8266 V3Lua CH340 Wi fi Dev. Board is a quick driving edge minimal effort Wi Fi innovation. Present day undeniable level develop LUA based innovation. It is a coordinated unit with all accessible assets ready. It is very easy to supplement your current Arduino projects or any improvement board that has I/O pins accessible .Modern Internet advancement devices, for example, Node.js can exploit the Node MCU with the implicit API to put your thought on the road to success right away.



Hub MCU is constructed dependent on the develop ESP8266 innovation to exploit the plentiful assets accessible on the web. Hub MCU has ESP-12 put together sequential Wi Fi coordinated with respect to board to give GPIO, PWM, ADC, I2C and 1-WIRE assets readily available, worked in USB-TTL sequential with overly solid mechanical strength CH340 for prevalent solidness on completely upheld stages. This module is one of the least expensive accessible wi Fi-modules on the lookout. V3 or Version3 is the most recent adaptation of this

module and it is a 32bit microcontroller.

LCD DISPLAY

Fluid gem shows (LCDs) have materials which join the properties of the two fluids and gems. Maybe than having a liquefying point, they have a temperature range inside which the particles are nearly pretty much as versatile as they would be in a fluid yet are assembled in an arranged structure like a precious stone.



Here the LCD show is utilized as a presentation screen to see the yield of the framework. The yield is gotten from the information base . The pH esteem is seen on the showcase screen.

SOFTWARE USED

Here arduino 1.8.6 software is used to program the microcontroller. Embedded C is used to code the hardware kit .

RESULTS AND DISCUSSION

The advanced pills used to foresee and the food quality. At the point when you eat after or before the nature of food can be predicate by advanced pills. The data are send to miniature regulator through remote by ZigBee transmitter and beneficiary. The ZigBee can be utilized uniquely in range between, 70 meters. In the event that we need significant distance correspondence IOT can be utilized. The microcontroller coding with implanted C and the cathodes used to the data. That implies, it can foresee pH levels in body.



Fig 1.1-Prototyne of overdose analyser



OUTPUT:

The yield can be taken from set of tests and saw utilizing screen and furthermore utilizing the Blynk account. This data is put away in database for additional reference

00 III 0 0				
Sec. 1				
States in the local second				
the second				
and dealers of family in the second s				
busher dated				
And an Annual				
har an and a star and				
and something				
Webs downlo				
1001 march				
/ forest data				
and a set of the set o				
And a set of the set o				
Parise				
and only the second				100
thing man prove same and it proves through more through at these states				
tions would be the the total and the block same, taking the base to	-	Sound of Conceptual		
PL. Same service as a second	-			The second state and the second state of the s
Dispense Drug NanDrug NDC Sag Dr				
				Dest Of Theory and The
	spenia, Fill			Dept_01_Shoowher_ND
2005-07-01 Hydrostfric 0172-2089 pc-qat	10	L dispenses	50 mg	90 V 1046525412409313632
2005-07-0; Hydrochik 0172-2089 po gat (2005-03-1; CM/5 50 (85689-002) via razval (90 4320	L disperses L disperses	50 mg 0.0	90 V 3046525432409333632 1 C282904834832039939
2005-07-01 Hydrosfrik 0172-2088 po qal (2005-03-1:04/1.58 - 45685-002 via nasali (2005-58-2:Hydrosfrik 0172-2088 po qal	90 4320 90	L dispersant L dispersant L dispersant	50 mg 0 h 50 mg	90 V 3046575413409030612 1 (2829014854632019919 90 N6421343613871277479
2005-07-01 Hydrosfeld 0172-2009 poligit (2005-03-11 044) 50 - 10669-002 via result (2005-98-21 Hydrosfeld 0172-2009 poligit (2005-98-21 Hydrosfeld 0172-2009 poligit (2005-98-21 Hydrosfeld 54569-033 cavity	90 4300 90 20	1. dispenses 1. dispenses 1. dispenses 1. dispenses	50 mg 0 h 50 mg 20 mg	90 V 8046575412409333612 1. (281991483403203913 90 76421143413871273479 20 (1640163335005579139
2005-07-01 Hydroshik (1172-2017) po gd 2005-05-1 (2015-95) - 9049 90 - 9049 90 yw nasar (2005-06-2 Hydroshik (1172-2017) 2017) - 2017 2005-06-2 Hydroshik (1172-2017) 2017 2005-06-0 proteines (1172-2017) 40 uwrtu (90 4320 90 20 1	1 depense 1 depense 1 depense 1 depense 1 depense 1 depense	50 mg 6 h 50 mg 20 mg 1 mg	90. V 10465 25413409333612 1. C28290143548032039329 90. N8421143813871373479 20. L1640181393805579139 1. U155423808878149982
2003-67-61 Hydramfel (1172-2018) po dd (2003-63-1, 2045-55) (2068) dd yw maai ((2003-63-1, hydrafel (1172-2018) po dd (2003-63-2) Hydrafel (1172-2018) po dd (2003-63-2) Hydrafel (1172-2018) po dd (2003-63-2) (1272-2018) (2018) (2018) (2005-63-2) (1272-2018) (2018) (2018) (2005-63-2) (1272-2018) (2018) (2018)	90 4300 90 20 1 1	L dispenses L dispenses L dispenses L dispenses L dispenses L dispenses	50 mg 6 h 50 mg 20 mg 1 mg 25 meg	90 V 10465754812409333612 1 C2829614934602039319 00 V642114381187537879 20 C1460161935800379399 1 U259425818679624999 1 X8136186757538117348
2003-67-0 Hypersenfeld (1172-2007 per out 2003-63-1 (2004 55) - (66689-00) van maaar (2005-63-1 (2004 55) - (66689-00) van maaar (2005-63-2 Hypersenfeld (1727-2007 per out 2005-63-0 (percentente 55249-035 carefry (2005-63-0) (2004 and (1726-0368) po out 2005-51-0) (2004 and (1726-0368) po out 2005-56-1) (2004 and (1726-0368) po out 2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (2005-66-1) (20	90 4320 90 20 1 1 90	L dispersant L dispersant L dispersant L dispersant L dispersant L dispersant L dispersant	50 mg 6 h 50 mg 20 mg 1 mg 25 men 10 mg	(0) V 10465 25432409313632 1 (2)(2)(2)(4)(4)(4)(2)(2)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)(4)
2005-97-01 (Helmentific 0117) 2009 po out 2005-98-11 (2004) 59 (Soles) 400 (star sum out) (2005-98-11 (Hydrochron 0117) 2008 (po out) 2005-98-21 (Hydrochron 0117) 2008 (po out) 2005-98-21 (Hydrochron 0116) 2009 (Hydrochron 2005-51-11 (Hydrochron 0116) 2009 (Hydrochron 2005-51-11 (Hydrochron 0116) 2009 (Hydrochron 2005-68-21 (Hydrochron 0116) 108 (star) 2005-68-21 (Hydrochron 0106) 108 (star)	90 4320 90 20 1 1 90 750	1 dispense 1 dispense 1 dispense 1 dispense 1 dispense 1 dispense 1 dispense 1 dispense 1 dispense	50 mg 6 h 50 mg 20 mg 1 mg 25 men 10 mg 10 mJ/kg	90 Y 10445 7541240931862 1. (20159) 45436000 9542 90 Ye442144611871577479 90 Ye442144611871577479 1. (201542101785000599339 1. (201542101786712017913 1. (201542101786712017913 1. (201542101786712017913 1. (201542101786712017913 1. (2015421017913017913 1. (201542101913017913) 1. (201542101913017913017913 1. (201542101913017913017913) 1. (20154210191017913017913017913 1. (2015421017913017913) 1. (2015421017913017913) 1. (2015421017913017913) 1. (2015421017913017913017913) 1. (2015421017913017913017913017913) 1. (20154210179130000000000
2005-67-61 Hpdfreeffel (1172-2007 por off (2005-65-1) 2045-95 (30689-60) van maar ((2005-65-1) Hpdfreeffel (1172-2007 por off (2005-66-2) Hpdfreeffel (1172-2007 por off) (2005-66-2) Hpdfreeffel (1172-2007 por off) (2005-67-2) Hpdfreeffel (1172-2007 por off) (2007-67-2007 por off) (2007-67-200	90 4300 90 20 1 1 90 760 20	L dispense L dispense L dispense L dispense L dispense L dispense L dispense L dispense L dispense	50 mg 6 h 50 mg 20 mg 1 mg 25 men 10 mg 10 mJ/kg 500 mg	99 V 10445 (2412)4993 1942 1. (2012/99,242)4493 (2912)9412 90 V 14212 (2412)4493 (2912)277479 20 (14645)627180005 99239 1. 1025423 19439 9923911 7344 20 V 14165 2429391012 74239 1. V 14165 2429391012 74239 1. V 14165 2429391012 74239 1. V 156020994014 754252114
2005-97-01 (Helmention 2017) 2009 po gat 2009-95-11 2045 59 (Robert 2017) 2009 po gat 2009-95-11 2045 59 (Robert 2017) 2009 po gat 2005-95-21 Hydrochron 2017) 2009 po gat 2005-95-21 (Helmention 2016) 2019 (Helmention 2005-95-14) (Helmention 2016) 2019 (Helmention 2016) 2019 (Helmention 2016) 2019 (Helmention 2016) 2019 (Helmention 2016) 2019 (Helmention 2016) 2019 (Helmention	90 4300 90 20 1 1 90 760 20 30 50	1 дерения 1 дерения	50 mg 6 h 50 mg 1 mg 25 mg 10 mg 10 mg 10 mJ/kg 500 mg 30 mg	90. V 100452542049933002 1. C2020914554546020029325 90. 00422140053821270429 20. L1660205393000299235 1. 012542530388704249980 1. 012542530388704249980 1. 01254253038870429800273281 1. 0126129402042732817542 1. 0125622999000475425203 1. 0125622942972148004275 1. 012562294297214800475 1. 0125622942972148004275 1. 012562294272148004275 1. 012562294272148004275 1. 0125622942748004275 1. 0125622942748004275 1. 012562294 1. 01256294 1. 01256294 1. 01256294 1. 01256294 1.
2005-97-01 (Helmentific 0177-2009) po off (2005-96-21 Hydrochroto 0177-2009) po off (2005-96-21 Hydrochroto 0177-2009) po off (2005-96-21 Hydrochroto 0177-2009) po off (2005-96-21 Hydrochroto 0178-2009) (Hydrochroto (2005-96-21 Hydrochroto 0178-2009) (Hydrochroto (2005-97-21 Hydrochroto 015111-1275-961 Hydro (2005-97-21 Hydrochroto 015111-1275-961 Hydro (2005-97-21 Hydrochroto 015111-1275-961 Hydro (2005-97-21 Hydrochroto 015111-1275-961 Hydro (2005-97-21 Hydrochroto 015111-1275-961 Hydrochroto (2005-97-21 Hydrochroto 015-1344-2000) po off (2005-97-21 Hydrochroto 0107-1342 Conty	90 4300 50 20 1 1 90 20 20 30 30 30	1 dispense 1 dispense	50 mg 6 h 50 mg 20 mg 1 mg 25 meq 10 mg 10 mg 10 mg 20 m	90. V 1004552442049333024 1. (200299)4534030039425 00. (1464516)21044515972370479 20. (1464516)210100579425 1. (1054516)210100579425 1. (1054616)210100579425 1. (1014616)2101005794723 1. (1014616)2101005794723 1. (1014616)2101005794723 1. (1014616)2101005794723 1. (1014616)210100579473 1. (1014616)210100579473 1. (1014616)2101076770057 1. (1014617467723012177000 1. (10146174677230121777000 1. (10146174677245721121777000 1. (10146174677245721121777000 1. (1014617467745721121777000 1. (10146174677457210) 1. (101461746774572112177000 1. (1014617467745721121777000 1. (1014617467745721121777000 1. (1014617467745721121777000 1. (101461746774572112177000 1. (101461746774572112177000 1. (101461746774572112177000 1. (101461746774572112177000 1. (101461746774572112177000 1. (101461746774572112177000 1. (101461746774572112177000 1. (10146174677457211277000 1. (1014617467745721177000 1. (10146174677457421777000 1. (1014617467745745745745745745745745745745745745745
2009-97-01 (hydrosefic) 2017 (2019) politik (2009-98-21 hydroseficio 2017 (2019) politik (2009-98-21 hydroseficio 2017 (2019) politik (2009-98-21 hydroseficio 2019) (2019) politik (2009-98-21 hydroseficio 2019) (2019) (2019) (2009-98-21 hydroseficio 2019) (2019) (2019) (2009-98-21 hydrosefic) (2019-2019) (2019) (2009-98-21 hydrosefic) (2019-2019) (2019) (2009-98-21 hydrosefic) (2019-2019) (2019) (2009-98-21 hydrosefic) (2019-2019) (2019) (2009-98-21 hydrosefic) (2019-2019) (2009-98-21 hydrosefic) (2019-2019) (2019-98-21 hydrosefic) (2019-2019) (20	90 4300 50 20 1 1 90 750 20 30 30 30 1	1 dispense 1 dispense	50 mg 6 h 50 mg 20 mg 1 mg 25 meq 10 mg 10 mg 10 mg 30 mg 30 mg 30 mg 25 meq 25 meq 25 meq	99 V 10445 24424000000000000000000000000000000
2005-97-01 (Helmention 2017) 2009 pro dat 2005-97-01 (DMI) 59-01 (DMI) 2009 (DDI) van musain (2005-96-21 (Hydrochron 2017) 2009 (pro dat 2005-96-21 (Hydrochron 2017) 2009 (pro dat 2005-96-21 (Hydrochron 2016) 2019 (Hydrochron 2005-97-11 (Hydrochron 2017) 2014 (Hydrochron 2005-97-11 (Hydrochron 2017) 2014 (Hydrochron 2005-97-11 (Hydrochron 2017) 2014 (Hydrochron 2005-97-11 (Hydrochron 2017) 2014 (Hydrochron 2005-97-11 (Hydrochron 2005-9	90 4300 30 1 1 90 750 30 30 30 30 30 30 30 30 30 30 30 30 30	1 dispense 1 dispense	50 mg 6 h 50 mg 1 mg 25 meg 10 mg 10 mg 10 mg 30 mg 500 mg 30 mg 25 meg 30 mg 30 mg	90. V 100445 244204993 3002 1. C282 99144534403100 29125 00. 044211445314571270479 20. 10460107380005 9925 1. 012545300148 000599005 1. 012445300148 0005990015 1. 01244530001490015575420 1. 01244530001990015575420 1. 012445200019900175505014 1. 0124452049272448004579900005 1. 024245348048799900005 1. 02445348048799900005 1. 0244534804879990005 1. 024554804879990005 1. 02455480487999005 1. 0245548048799005 1. 024555555555 1. 024555555555555555555555555555555555555
2003-67-61 Hydrametrikii (1172-2018) po qat (2003-63-1) DAN 59. (2008) 400 ya masali ((2003-63-1) Hydrametrikii (1172-2018) po qat (2005-63-21 Hydrametrikii (1172-2018) po qat (2005-63-21 Hydrametrikii (1172-2018) po qat (2005-63-1) Hontaniumi (1124) 4000 po qat (2005-63-1) Hontaniumi (1124) 4000 po qat (2005-63-21 Hontaniumi (1124) 4000 po qat (2005-63-21 Hontaniumi (1124) 400 po qat (2005-63-21 Hontaniumi (1124) 400 po qat (2005-63-21 Hydrametrikii (1124) 427 500 HAS PC (2005-63-21 Hydrametrikii (1124) 427 500 HAS PC (2005-63-21 Hydrametrikii (1124) 427 500 HAS PC (2005-63-21 Hydrametrikii (1124) 428 20 HAS PC (2005-63-21 Hydrametrikii (1124) 428 20 HAS PC	90 4300 90 30 4 50 700 30 30 30 4 30 30 30	L dispense L dispense	50 mg 6 h 50 mg 1 mg 25 meq 10 m/kg 50 mg 30 mg 30 mg 25 meq 30 mg 20 mg 20 mg 20 mg 20 mg 20 mg 20 mg	99. V 10445 24424993 3042 1. (20239) 445340 2019 412 201 (144415) 4441547 21774 279 201 (144415) 71714 279 201 (144415) 7171410005 74239 1. 101345 24510005 74239 1. 101345 24510005 74249 1. 101350 24510005 74249 1. 101550 2451000000000000000000000000000000000000
2009-97-01 (Hermitelin 2017) 2009 po dat 2009-97-11 (2016) 34 (2019) 4000 4000 via musai (2009-96-21 (Hydrochron 2017) 2009 (po dat 2009-96-21 (Hydrochron 2017) 2009 (po dat 2009-96-21 (Hydrochron 2017) 2009 (po dat 2009-96-21 (Hydrochron 2017) 2019 (po dat 2009-96-21 (Hydrochron 2011) 202 (2016) 90 2009-96-21 (Hydrochron 2017) 2014-202 (2016) 90 2009-96-21 (Hydrochron 2017) 2014-202 (2016) 90 2009-96-21 (Hydrochron 2017) 2014-202 (2016) 90 (2006-96-21 (Hydrochron 2017) 2014-2016) 90 (Hydrochron 2016) 90 (Hydrochron 2017) 90 (Hydrochron 2017) 90 (Hydrochron 2017) 90 (Hydrochron 2017) 90 (Hydrochron 2017) 90 (Hydrochron 2017) 90 (Hydrochron 2016) 90 (Hydrochron 2017) 90 (Hydrochron 2016) 90 (Hydrochron 2017) 90 (Hydrochro	50 4300 50 70 1 50 700 30 30 30 30 4000	L dispense L dispense	50 mg 6 h 50 mg 1 mg 25 meg 10 ml/hg 500 mg 500 mg 500 mg 25 meg 25 meg 25 meg 25 meg 25 meg 25 meg 25 meg 25 meg 25 meg 25 meg	90 V 100452542049933002 1 C2829914554020029129 00 04421143013471270479 20 L16601659300029929 1 015542540148 V 0440989 1 015461555501487004990317 1 011481259708477928117394 10 V 14812597084779281139 10 756005990013756203 10 756005990013756203 10 756005990013756203 10 766005990147520288 10 76600599014211177708 10 76600599014211177708 10 76600599014211177708 10 76600599014211177708 10 76600592084808 10 76705520849000421455 10 76600592084808 10 767052084900441455 10 76600592084808 10 767052084900441455 10 76600592084808 10 767052084900441455 10 76600592084808 10 767052084900441455 10 767052084900441455 10 76600592084808 10 767052084900441455 10 76600592084808 10 767052084900441455 10 76600592084808 10 767052084808 10 76705208 10 76705208 10 76705208 10 76705208 10 76705 10 76705 1
2009-97-01 (Helmention 2017) 2009 po out 2009-99-11 (DMI) 59-1606-99-000 view means (2009-99-21 Hydrochronol 54569-035 (seally 2009-99-21 Hydrochronol 54569-035 (seally 2009-99-21 (Hordsonian 1046-0888) po out 2009-99-10 (Hordsonian 1046-0888) po out 2009-99-10 (Hordsonian 2046-0888) po out 2009-99-10 (Hordsonian 2046-0888) po out 2009-99-10 (Hordsonian 2046-0888) po out 2009-99-10 (Hordsonian 2046-0888) po out 2009-99-10 (Hordsonian 2018) (Hordsonian 2018) 2009-99-10 (Hordsonian 2018) (Hordsonian 2018) 2009-99-10 (Hordsonian 2018) (Hordsonian 2018) 2009-99-10 (Hordsonian 2018) (Hordsonian 2018) 2009-99-10 (Hordsonian 2018) (Hordsonian 2018) 2009-91-10 (Hordsonian 2018) (Hordsonian 2018) 2009-91-20 (Hordsonian 2018) (Hordso	90 43300 90 70 1 1 90 700 700 10 30 40 30 4330 30	I dispense	50 mg 6 h 50 mg 21 mg 125 meg 10 mg 10 m/Ag 500 mg 23 mg 25 meg 25 meg 20 mg 20 m	99. V 100455242049933002 1. 12823914443185121270479 20. 114643167318100359129 20. 114643167318000359129 1. 1035430188 000459129 1. 1035430188 000459129 1. 10154673627339117308 1. 10154673627339127308 1. 1015467362733912308739 1. 024536888473967392 1. 024536888479860074422211777789 1. 02453688847986007442221177789 1. 02453688847986007442221177789 1. 02453688847986007442221177789 1. 02453688847986007442221177789 1. 02453688847986007442221177789 1. 02453688847986007442221177789 1. 024536888497986007442221177789 1. 024536888497986007442221177789 1. 024536888497986007442221177789 1. 02453688497986007442221177789 1. 02453688497986007442221177789 1. 02453688497986007442221177789 1. 02453688497986007442221177789 1. 02453688497986007442221177789 1. 024536884999007442221177789 1. 024536884990007442221177789 1. 024536884990007442221177789 1. 024536884990000000000000000000000000000000000
2009-97-01 (hydrosofia) 20172 (2009) polisit 2009-97-11 (2004) 59-10 (2009) 4003 (via rossa) (2009-97-11 (2004) 59-10 (2009) 4003 (via rossa) (2009-97-21 (hydrosofia) 20172 (2009) polisit 2009-97-21 (hydrosofia) 20173 (via via via 2009-97-21 (hydrosofia) 20175 (via via via via 2009-97-21 (hydrosofia) 20175 (via via via via 2009-97-21 (hydrosofia) 20175 (via via via via via 2009-97-21 (hydrosofia) 20175 (via via via via via 2009-97-21 (hydrosofia) 20175 (via via via via via via 2009-97-21 (hydrosofia) 20175 (via via via via via via 2009-97-21 (hydrosofia) 20123 (via via via via via via 2009-97-21 (hydrosofia) 20123 (via via via via via via via via via via	90 4330 90 20 1 1 90 760 20 20 20 30 4030 30 1	Indepense	50 mg 6 h 50 mg 20 mg 1 mg 20 mg 10 mg 10 mg 10 mg 20 mg 1 mg 20 mg 20 mg 1 mg 20 mg	90 V 1004452442499330029455 1 C2829944545402009455 00 IN4421140013621270479 20 L166010538000594209 1 015045001898000594209 1 01504500189400047512011 1 01504504940004754050144 10 V 10030400040754050144 10 V 100304000401514054 10 040402340252020888882 10 044453262020888882 10 0445335534890004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004014455 1 12887507895354898004784555 1 1288750789534898004784555 1 1288750789534899004784555 1 128875078953489004784555 1 128875078953489004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 128875078953489004784555 1 128875078953489004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 1288750789534899004784555 1 128875078953489004784555 1 1288757845555 1 1288757845555 1 1288757845555 1 1288757845555 1 1288757855 1 12887578555 1 12887578555 1 12887578555 1 12887578555 1 12887578555 1 12887578555 1 12887578555 1 12855555555555555555555555555555555555
2009-97-01 (Helmention 2017) 2009 pro gat 2009-97-11 (DMI) 59-100699-0003 via musai (2009-96-21 (Hydrochron 2017) 2009 pro gat 2009-96-21 (Hydrochron 2017) 2009 pro gat 2009-96-21 (Hydrochron 2018) 2019 (Hydrochron 2009-97-11 (Hydrochron 2012) 2019 (Hydrochron 2009-97-11	90 4330 90 30 1 1 90 30 30 4330 30 4330 30 1 300	I dispensat	50 mg 6 h 20 mg 20 mg 15 meg 10 mg 10 mg 10 mg 20	99. V 1004552442049933002 1. C282.9914534021092925 00. 1044211443513472157479 20. 1046016738000579293 1. 005345001897000579293 1. 005345001897000579293 1. 001345000590001877600 1. 0014882000900018776001 1. 001488200090001875650018 1. 0014500090001875650018 1. 0014500090001875650018 1. 0014500090001875650018 1. 00145000900001875600019 1. 00145000090001875600019 1. 0014500009000189500019 1. 00145000000000189500019 1. 001500000000000018314844000 1. 0015000000000000000000000000000000000
2003-97-0 (Hydraminia UT72-2019) to all 2003-93-1 (DM1 59) (6069-000) via maai (2005-93-1 (Hydraminia C4569-000) via maai (2005-93-1 (Hydraminia C4569-000) via maai (2005-93-1) (Hodraminia U456-000) via maai (2005-94-1) (Hodraminia U456-000) via day 2005-94-1 (Hodraminia U456-000) via day 2005-94-1 (Hydraminia U456-000) via maai (2005-94-1 (Hydraminia U456-000) via maai (2005-94-1 (Hydraminia U456-000) via maai (2005-94-1 (Hydraminia U456-000) via maai (2006-94-1 (Hydraminia U4525-000) Via Miai (2006-94-1 (Hydram	90 43300 90 30 1 1 50 90 30 30 400 30 400 30 400 30 90 90	Indepension	50 mg 6 h 50 mg 20 mg 10 mg 10 mg 10 mJ/ag 500 mg 25 meq 10 mJ/ag 500 mg 25 meq 10 mg 10 mg 1	99. V 10445 24424993 3012 1. (201299) 443443 (317) 24715 20. (14443) 54712 (247) 27 20. (14443) 54715 (27) 27 20. (14443) 54715 (27) 27 1. (21) 24435 (27) 2511 (27) 24 1. (21) 2445 (27) 2511 (27) 24 1. (21) 2455 (22) 2512 (22) 2512 1. (21) 2512 (22) 2512 (22) 2512 (22) 2512 1. (22) 2512 (22) 2512 (22) 2512 (22) 2512 (22) 2512 1. (22) 2512 (22) 2512 (22) 2512 (22) 2512 (22) 2512 (22) 2512 1. (22) 2512 (22) 2512 (22) 2512 (22) 2512 (22) 2512 (22) 2512 1. (22) 2512 (22)
2009-97-0 (hydrochic UTZ 2009) po off 2009-97-1 (2004) 59-100000 000 via musal (2009-96-2 (hydrochic UTZ 2009) po off 2009-96-2 (hydrochic UTZ) 2009 (Po off 2009-96-2 (hydrochic UTZ) 2009) Po off 2009-96-2 (hydrochic UTZ) 2009 (Po off 2009-96-2 (hydrochic UTZ) 2009) Po off 2009-96-2 (hydrochic UTZ) 2009 Po off 2009-96-1 (hydrochic UTZ) 2009 Po off 2009-96-1 (hydrochic UTZ) 2009 Po off 2009-96-1 (hydrochic UTZ) 2009 Po off 2009-95-1 (hydrochic UTZ) 2009 Po off 2009-97-1 (hydrochic UTZ) 2009 Po off	90 43300 90 30 1 1 50 90 30 40 30 30 40300 30 1 3000 30 30 30 30 30 30 30 30 30 30 30 3	Indepensat	50 mg 6 h 20 mg 20 mg 21 mg 21 mg 20 mg 20 mg 20 mg 22 mg 22 mg 22 mg 22 mg 23	90 V 100452542049933002 1 C2829914554020029129 00 04421143013471270479 20 116621653500059529 1 015542048800059529 1 01554204880059529 1 015462159708407908796 1 0116820099001375620 1 0116820099001375620 1 011682009900142121177708 0 09690074421211777080 0 0969007421211770800 1 0 044932520480009753164989 1 0 041932520480009753164989 1 0 041932520480009753164989 1 0 051220490074210151804991 1 0 051220480009753164989 1 0 05122048000753164989 1 0 05122048000753164989 1 0 05122048000753164989 1 0 05122048000753164989 1 0 05122048000753164989 1 0 0512109005785164989 1 0 0512109005785164989 1 0 051210901591894927 90 01257289412911139546342 10 051417272544150924812109389
2009-97-01 (Helmention 2017) 2009 point 2009-97-01 (DMI) 59-00009-0003 varian varianti (2009-96-21 (Hydrochron 2017) 2009 point of 2009-96-21 (Hydrochron 2018) 2009 (His varianti (2009-96-21 (Hydrochron 2018) 2018) (His Varianti (2009-96-21 (His Varianti (His Varianti (2009-96-21 (His Varianti (2009-96-21 (His Varianti (His Varianti (2009-96-21 (His Varianti (His Varianti (2009-96-21 (His Varianti (His Varianti (H	90 4330 90 27 1 30 20 30 4330 4330 30 4330 30 30 30 30 30 30 30 30 30 30 30 30	Independent	50 mg 6 h 50 mg 20 mg 15 mag 15 mag 15 mag 20 mg 20 mg 20 mg 21 mag 20 mg 20 mg 20 mg 20 mg 20 mg 20 mg 20 mg 4 mg 4 mg 4 mg 4 mg	99. V 10445 24424993 3012 1 1. (2012)991453 4451357 (2017) 20.0.(164515(7316105)9125 0.0.(164515(7316105)9125 1. (1054515(731611)7)483 1. (1014615(731611)7)483 1. (1014615(731611)7)483 1. (1015)930004000179420 1. (1017)93000794212117088 10.0.99990079421211777000 1. AGE/344040794007942130 10.0.99990079421211777000 1. AGE/344040794007942130 10.0.47021534004000421445 1. (1017)700103400402145 1. (1017)7001034004220600220 1. (1017)70010340040220600220 1. (1017)7001034004220600220 1. (1017)7001034004220600220600220 1. (1017)7001034004220600220600220600220 1. (1017)7001034004220600220600220600220 1. (1017)700103400422060020060002006002006002006000000
2009-67-0 (hydrosettik) 2012 (2009) o dit 2009-67-1 (2004) 59-2009-000 (via russa) (22005-69-2 (hydrosettik) 2172-2009 (proj od 22005-69-2 (hydrosettik) 2123-2019 (proj od 22005-69-2 (hydrosettik) 22-2019 (proj utarta) (22005-69-2 (hydrosettik) 22-2019 (proj utarta) (22006-69-2 (hydrose	90 43300 90 27 1 30 750 30 4530 4530 4530 4530 4530 30 50 50 50 50 50 50 50 50 50 50 50 50 50	I dispense	50 mg 0 h 30 mg 25 mg 25 mg 10 mg 25 mg 10 mg 30 m	90 V 100452542049933002 1 C2829914554020029125 00 044221440315472127447 20 L466216353800029925 1 0155450018700429980 1 0154550018700429980 1 0154550018700429980 1 0154500490074521211777000 1 0 046220427314812989 1 0 046204273148129897 1 0 04620427302088082 1 0 04620427302088082 1 0 04620427302088082 1 0 04720520480004021455 1 0 057208210029820887 1 0 05720821081939940025 1 0 05720821081097992025 1 0 05720821081097992025 1 0 057208210810979920887 1 0 05720821081097994031 1 0 05127388110979940205 1 0 05127388110979940205 1 0 05127388110979940205 1 0 05127388110979940205 1 0 05127388110979940205 1 0 0512044605745110198940205 0 0 051204455745111128840 0 0 05120445574512124840 0 0 05120445574512124840 0 0 05120445574512128440 0 0 05120445574512128440 0 0 05120445574512128440 0 0 05120445574512128440 0 0 05120445574512128440 0 0 05120445574512128440 0 0 0512044557451282440 0 0 0512044557451282440 0 0 0512044557451282440 0 0 051204455745524412855440 0 0 05120455745524412855440 0 0 05120455745524445555445555445555445555445555445555445555
2005-67-01 (Hermstein) 20172-2019 to out 2005-69-11 (DMI) 59-05069-000 view means (2005-69-21 (Hydrosofron 2017)-2019 pro-out 2005-69-21 (Hydrosofron 2017)-2019 pro-out 2005-69-11 (Portamisum 2026-00000 pro-out 2005-69-11 (Convertised 2017)-2019 (Hydrosofron 2016) 2005-69-11 (Convertised 2017)-2019 (Hydrosofron 2016) 2005-69-11 (Convertised 2017)-2019 (Hydrosofron 2016) 2005-69-11 (Convertised 2016)-2019 (Hydrosofron 2016) 2006-69-11 (Convertised 2016)-2019 (Hydrosofron 2016) 2006-69-11 (Hydrosofron 2013)-2018 (Higrosofron 2016) 2006-69-11 (Hydrosofron 2013)-2018 (Higrosofron 2016) 2006-69-11 (Hydrosofron 2013)-2018 (Higrosofron 2016) 2006-69-11 (Hydrosofron 2013)-2018 (Higrosofron 2016) 2006-69-12 (Convertised 2013)-2019 (Higrosofron 2016) 2006-69-12 (Hydrosofron 2013)-2018 (Higrosofron 2017) 2006-69-12 (Hydrosofron 2013)-2018 (Higrosofron 2017) 2006-69-12 (Hydrosofron 2013)-2018 (Higrosofron 2017) 2006-69-12 (Hydrosofron 2013)-2018 (Higrosofron 2017) 2006-69-12 (Hydrosofron 2017)-2018 (Higrosofron 2018) 2006-69-12 (Hydrosofron 2017)-2018 (Higrosofron 2018) 2006-69-12 (Hydrosofron 2017)-2018 (Higrosofron 2018) 2006-69-12 (Hydrosofron 2017)-2018 (Higrosofron 2018) 2006-69-12 (Hydrosofron 2018) (Higrosofron 2016) 2006-69-12 (Hydrosofron 2018) (Higrosofron 2018) 2006-69-12 (Hydrosofron 2018) 2006-69-1	90 4330 90 27 1 30 20 30 4330 4330 30 4330 30 30 30 30 30 30 30 30 30 30 30 30	Independent	50 mg 6 h 50 mg 20 mg 15 mag 15 mag 15 mag 20 mg 20 mg 20 mg 21 mag 20 mg 20 mg 20 mg 20 mg 20 mg 20 mg 20 mg 4 mg 4 mg 4 mg 4 mg	99. V 10445 24424993 3012 1 1. (2012)991453 4451357 (2017) 20.0.(164515(7316105)9125 0.0.(164515(7316105)9125 1. (1054515(731611)7)483 1. (1014615(731611)7)483 1. (1014615(731611)7)483 1. (1015)930004000179420 1. (1017)93000794212117088 10.0.99990079421211777000 1. AGE/344040794007942130 10.0.99990079421211777000 1. AGE/344040794007942130 10.0.47021534004000421445 1. (1017)700103400402145 1. (1017)7001034004220600220 1. (1017)70010340040220600220 1. (1017)7001034004220600220 1. (1017)7001034004220600220600220 1. (1017)7001034004220600220600220600220 1. (1017)7001034004220600220600220600220 1. (1017)700103400422060020060002006002006002006000000

It gives the variety in fixation concerning the time. The yield is plotted by blynk account in which the information is taken care of and putaway in the database. Using this, We can refresh of the working advanced pill progressively.

ADVANTAGES

- It can be effortlessly taken out when it not needed.
- Since the information is put away in data set we can access at whenever we required.
- Affordable expense when we contrasted with the swallowable advanced pill. .
- Blooming innovation in future.

CONCLUSION

Consequently, the model of advanced pill is planned and tried with the test tests. The size of advanced pill will be diminished in future under a few conditions as for the nanotechnology. Accordingly the planned model of computerized pill to screen the gastro-intestinal piece of the body and to screen the body's boundaries utilizing IoT has been planned and executed effectively.

FUTURE WORK

In future the size ought to be limited as conceivable utilizing nano and MEMSinnovation. Here, Node MCU can be supplanted with ARM processor for advance highlights.

REFERENCE

[1]. Jose Luis Merino, Onur Kazanc, Nicolas Brunner, Vincent Schlageter, Michel Demierre, Catherine Dehollain, "Pediatric Size Swallowable Glass Pill for Digestive Motility Analysis," Switzerland, pp. 3-4,IEEEApril 2018.

[2]. Rosa Goffredo, Student Member, IEEE, Alessandro Pecora, Luca Maiolo, Andrea Ferrone, Eugenio Guglielmelli," A Swallowable Smart Pill for Local Drug Delivery, Journal Of Microelectromechanical Systems, pp.3–7,March 2007.

[3]. E.A. Johannessen, Lei Wang, C. Wyse,

D.R.S. Cumming, J.M. Cooper,"Biocompatibility of a Lab-on-a-Pill Sensor in Artificial Gastrointestinal Environments", IEEE Transactions on Biomedical Engineering, vol. 53,pp.2333-2340, 2006

[4]. E. Guglielmelli, "A keen pill for drugconveyance with detecting capacities," in Proc. EMBC, Milan, Italy, pp. 1361–1364, Aug. 2015.

[5]. G. Skillet, L. Wang, "Swallowable Wireless Capsule Endoscopy: Progressand Technical Challenges", GastroenterologyResearch and Practice,April 2012

[6]. J. L. Gonzalez-Guillaumin, D. C. Sadowski, K. V. I. S. Kaler, and M. P. Mintchev, "Ingestible container for impedance and pH observing in the throat," IEEE Trans. Biomed. Eng., vol. 54, no. 12,pp.2231–2236, Dec. 2007.

[7]. R. Goffredo, A. Ferrone, L. Maiolo, A. Pecora, and D. Accoto,"A scaled down electrolytic siphon sensorized with a strain check basedon thermoplastic nanocomposite for drug conveyance frameworks," in Proc.EMBC, Milan, Italy, pp. 3205–3208, Aug. 2015.

[8]. P. Hiroz, V. Schlageter, J.C. Givel and P. Kucera," Colonic Movements In HealthySubjects As Monitored By A Magnet Tracking System," inProc.EMBC, Journal, Feb 2009.

[9]. D. Accoto, V. Mattioli, P. Valdastri, A. Menciassi, and P. Dario,"A scaled down drugconveyance framework for intra- corporal use," in Proc.8th Italian Conf. Sens. Microsyst., Trento, Italy, pp. 12–14, Feb. 2003.

[10]. A. Pecora et al., "Strain check sensors dependent on thermoplastic nano composite for observing inflatable constructions," in Proc. IEEE Metrol.Aerosp. (MetroAeroSpace), pp. 84–88, May 2014.

[11]. O. Brand, G. K. Fedder, C. Hierold, and

J. G. Korvink, Reliability of MEMS: Testing of Materials and Devices, O. Tabata and T. Tsuchiya, Eds. Hoboken, NJ, USA: Wiley, March 2013.

[12]. J. Y. Skillet, P. Lin, F. Maseeh, and S.

D. Senturia, "Check of FEM investigation of burden avoidance techniques for estimating mechanicalproperties of slim movies," in IEEE Solid-State Sens. Actuator Workshop,4th Tech. Burrow., pp. 70–73, Jun.1990.

[13]. G. Ciuti, A. Menciassi, P. Dario, "Container Endoscopy: From CurrentAchievements to Open Challenges", IEEE Reviews in BiomedicalEngineering, vol. 4, pp.59-72, April 2011

[14]. D. Accoto, V. Mattioli, P. Valdastri, A. Menciassi,"A scaled down drug-conveyance framework for intra-corporal use," in Proc.8thItalian Conf. Sens. Microsyst., Trento, Italy, pp. 12–14, Feb. 2003.

[15]. A. Pecora et al., "Strain check sensors dependent on thermoplastic nanocomposite for observing inflatable designs," in Proc. IEEE Metrol.Aerosp. (MetroAeroSpace), pp. 84–88, May 2014.