
EXPERIMENT 7 ARVULH TE TANA TUIA PAWLH DAMDAWI PEK LEH TUI TIHTIANGHLIM

Zirlai ruangam

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7.1 THUKAMKEUNA

Tui hmanga damawi pek hi thil pathum atan mamawh a ni a: 1. Therapeutic – natna hluarlai leh lanchhuah laia enkawl nana damdawi pek. 2. Prophylactic – natna awm maithei laka in ven nan. 3. Supportive – ardamlo damkhaw chhuah nana puitu tura pek. Damdawi chi hrang hrang natna ven nan leh enkawl nan leh an rahchhuah a that nan pek an ni thin a. Damdawi pekdan larber chu tuia pawlh a pek hi a ni. Tui nena pek dawn chuan, damdawi in hna tha taka a thawh theih nan damdawi mamawh zat tur uluk taka chhutchhuah hmasak tur a ni a, chutilochu pektlem palh chuan an thatpui tur angin an tha pha dawnlo a ni. Chumi piah lamah, pek tam lutuk chuan a hlauhawm theih bakah a heksak mai mai a ni. Tui hi chawtha mamawh zinga telve a ni a. Arvulh te an hrisele that zawk nan tui thianghlim natna hrik pailo neih hi thil pawimawh tawp a ni. Tui a awm natna hrikho tihbo nana tui tihthianghlim hi thil tul makmawh, natna kaichhawn theih ven nan leh arhrisele na vawn that nan te leh an thawhchhuah a lo that zawk theih nan te thil tul tak a ni.

Thiltum

He zirlai zawh hunah chuan heng hi ilo ti thei tawh ang:

- Damdawi ngaizattur chhutchhuah leh pek dan tur ruahmanna; leh
- Tui tihthianghlim nana hman thin damdawi thlan dan leh hmandan phung hriatfiahna.

7.2 EXPERIMENT

7.2.1 Thubul

Damdawi tuia pawlh chi hman hian ar te chuan damdawi chu tuia a chakna hloh anih hma in leh eihun chhung tura ruatchhung ngeiin an eitur zat bituk an in tel ngei tur a ni. Tui intur chu a fimin a hrisele tur a ni. Tui ml khat zel ah bacteria 1,000 aia tam pai leh *E.coli* natna hrik ml khat zelah 50 aia tam pai tui chu ar pek atan a tha tawklo tihna a ni. Chuvangin, tui uluk taka tihthianghlim hi tui atanga kaitheih natna laka him nan a tul hle a ni.

7.2.2 Mamawh

- Ar pekchi damdawi larzual
- Tui tihthianghlim nana hman chi damawi larzual

7.2.3 Tih dan tur

Damdawi tuia pawlh dan leh tui tihthianghlim dan a hnuai ah hian sawifiah a ni e:

(A) Damdawi tuia pawlh chungchang

- 1) Mamawh dan azirin Damdawi thlan phawt tur a ni. A chhan chu a siamtu tamtak te hian a hming hnan vuah in chi tamtak anga lang an siam thin vang a ni. Dan naranin, veterinary mithiam te leh poultry mithiam te thu leh hla damdawi hman tur chungchangah rawn hmasak a finthlak viau ang. A damdawi hming leh pekzat tur te pawh zirlai hmasa ah ziahlan alo ni tawh a ni.
- 2) Damawi ngaizat tur 7.2.4 (i) a tarlan angin chhutchhuak rawh.
- 3) Damdawi chu tuizemah mamawh zatchiah pawlh rawh.

(B) Tui tihthianghlim chungchang

Tui intur kaltlang hian natna hrik tam tak thehdarh a ni thin a. Hemi avang hian, tui intura natna hrik alo tlem theih nan tui tihthianghlim hi a lo tul thin a ni. Tui tihthianghlim dan kawng hrang hrang te a hnuai ah hian sawifiah a ni.

(i) Chlorination

Hei hi hman larber pawl a ni. A tih dan chu bleaching powder emaw chlorine tuiril (liquid chlorine) emaw a hnuai ah tarlan anga tuizema pawlh tur a ni.

a) Bleaching powder hman dan

Bleaching powder hi awlsam taka hmuh theih tui tihthianghlimna a ni a. Anihna takah chuan chalk-based 33% chlorine pai atanga siamchhuah a ni. Chlorine hi rangtaka riral thei anih avang hian a tharlam zel hmana dahlawk vak loh tur a ni. A tlawm a, hman a nuam a, pawlh tur ngaizat aia tam pawlh palh pawhin pawl lutuk a thlen lova ni. Tui 1,000 litres zelah 2 g bleaching powder pawlh tur a ni.

- 1) 7.2.4 (ii) a tarlan zulzuiin tuizem dawnzat chawckchhuak rawh.
- 2) Bleaching powder ngaizat tur bukna hmangin teh chhuak rawh.
- 3) Buk chhuahsa chu tui 3-5 litres velah pawlh la, uluk takin chawhpawlh rawh.
- 4) Chutia chawhpawlh sa chu tuizemah leihlut vat rawh.
- 5) Darkar 3 inchiah hnu ah tui chu in atan a hman theih tawh ang.

b) Liquid chlorine hman dan

Liquid chlorine hi tamtak hmuh tur a awm a. 10 ml liquid chlorine hi tui 100 litres zela tan a tawh a ni.

- 1) 7.2.4 (ii) a tarlan angin tuizemin tui a dawn theih zat tur chawckchhuak rawh.
- 2) Chumi azir chuan liquid chlorine mamawh zattur chhutchhuak la tuizemah chuan pawlh rawh.
- 3) Darkar 3 chhung a inchiah hnuah tui chu a hmantheih tawh a ni.

Note

- Zan dar 9 hnu lamah ar te hian tui an intlem tawh avangin, hemi hnu hian engemaw chen a inchiah theih nan bleaching powder/liquid chlorine te hi hman a tha a ni.
- Chlorine hmanga tui tihthianghlim te hi nisa emtir loh tawp tur a ni.

(ii) Tui tihthianghlim dan dang te

Chlorine hi a mantlawm ber leh tha bawk si a ni a; chuvangchuan, hman nasat ber pawh a ni. Tui tihthianghlimna chidang iodine (povidone iodine), quaternary ammonium compounds te pawh hman theih an ni bawk. Henghi tuirila siam a ni a, liquid chlorine a tihdan angin tuia pawlh mai tur a ni. Tui tihthianghlimna hrang hrang tuia pawlh zattur a hnuaiha hian tarlan a ni.

Table 6: Tui tihthianghlimna – chawhpawlh leh a pawlh zattur

| Damawi hming | Chawhpawlh | Pawlh zattur |
|---|--|------------------|
| Acid dodecyl dimethyl ammonium chloride | Propionic sodium acetate, Tartaric sodium acetate | 1 ml/50 litres |
| Bleaching powder | 33% available chloride | 2 g/1,000 litres |
| Chlorine | 5% Sodium hypochloride | 1 ml/10 litres |
| Iodine | 1.6% iodine | 1 ml/ 10 litres |
| Quaternary ammonium compounds | 2% Dimethyl alkyl- Benzalkonium chloride | 1 ml/10 litres |

Note: Tui ah chuan chirh emaw bawhlawh dang emaw a tam viau chuan alum telh tur a ni a, alum telh hnu ah darkar 24 chhung khawihchet loh tur a ni.

7.2.4 Chhutchhuah dan

(i) Tuia pawlh chi damawi tan

Entirman: Ciprofloxacin 15mg/kg body weight ang zelin nikhatah pek tur ni sela.

- Ar 8000 atam ah ar pakhat rihzawng 500g anga chhut nisela.
- An zavaia rihzawng chu $8,000 \times 500g = 40,00,000$ g i.e. 4,000 kg alo ni ang.
- 15mg/kg body weight zela chhutin damdawi mamawh zattur chu $4,000 \times 15 = 60,000$ mg i.e. 60g nikhat atan a tawk thei ang.

Note: Damdawi peknana tui mamawh zattur chu nikhata an chawei zatin a hril thei a. Ar hian chaw 1g an ei hian tui 2ml an in ve ziah anga chhut a ni. Nipui lai chuan, an tui inzat chu 3-4ml, chaw 1g an ei zelah a ni thei a ni.

(ii) Tui tihthianghlim nan

A hnuaiha tarlan formula hmang hian tuizemin tui a dawnzat a chhutchhuah theih a ni:

- Tuizem bial – Volume (cft) = $\pi r^2 h$, where, $\pi = 22 \div 7$, r = radius and h = height (in feet)
- Tuizem killinei – Volume (cft) = $L \times W \times H$ where, L = length, W = width, H = height (in feet)

Note: 1 cft. = 28.3 litres of water. Tichuan, tuizemin tui a dawn zattur chu = Volume in cft × 28.3 litres.

7.2.5 Hmuhchhuah

I farm tlawhna hmuna tui an tihthianghlim dan kawnghmang i hmuh dan sawi rawh.

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7.3 FIMKHURNA TUR TE

- Damdawi pektur zat, ar rihzawng azir leh ar tamdan azir ten diktaka chhuatchhuah thin tur.
- Chlorine hmanga tui tihthianghlim reng reng nisa hnuaiah pholan loh tur a ni.
- A khat tawkin tuiin bacteria a paitamdan leh chlorine ten an tih thianghlim that tawk dan enfiahfo tur a ni.



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