

Excellent Center Excellent Center of Waste Utilization and Manage

ÈÙ'ÀìϣÇÒÁà»ç'ìàÀÒÈà©¼ÒÐ·Ò§'éÒ'ì;ÒÃ'Ñ'ì;ÒÃ

áÀÐãé»ÀÐãÀ¹ì"ÒìçìšàÈÒÁíØμÈÒË;ÁÁÁ;ÒÀà;ÉμÃ

Excellent Center of Waste Utilization
and Management (ECoWaste)

ϣÇÒÁà»ç'ìÀÒçìšÈÙ'Àì ECoWaste

ÈÙ'ÀìϣÇÒÁà»ç'ìàÀÒÈà©¼ÒÐ·Ò§'éÒ'ì;ÒÃ'Ñ'ì;ÒÃ áÀÐãé»ÀÐãÀ¹ì"ÒìçìšàÈÒÁíØμÈÒË;ÁÁÁ;ÒÀà;ÉμÃ (Excellent Center of W
ECoWaste à»ç'ìÈ'èçÀ§Ò'ÀÒÁμéϣÇÒÁÁèçÁÁ×ìçìšÈ'Ò'Ñ'¼Ñ²'ÒáÀÐ½Òì'Í°ÁÁÁÁ§§Ò'μé'á°° áÀÐ³Ð·.ÁÑ¼ÁÒ;Á°ÒÇÀÒ¼áÀÈ
ÈÙ'Àì¼Ñ'ì;ØìçÒÈç;ÁÁÁáÀÐà·πá'áÁÁÒ°ÒÇÀÒ¼áÈè§ªÒμÒ (ã°áíà·π) ÈÓ'Ñ;§Ò'¼Ñ²'ÒÇÒ·ÁÒÈÒÈμÁíáÀÐà·πá'áÁÁÒáÈè§ªÒμ
á'ÁáÁÒèÁ"Òì;ÒÁÁÇÁ;ÁØèÁçìšìÒ"ÒÁÁì 'Ñ;çÒ"ÑÁáÀÐÇÒÈç;Á·ÒèÈ'á"éÒ'ì;ÒÃ'Ò°Ñ'ì'ÉÒàÈÒÁμÑé§áμè»Ò¼.È. 2523 á'Áà'è
'ÉÒàÈÒÁ"Òì;áÁ§§Ò'á»é§ÁÑ'ÉÒ»ÐÈÁÑ§ á»é§çéÒç 'ÉÒÁÑ'»ÒÁíÁ ÍÒÈÒÁáÀÐ¼ÁáÁé;ÁÐ»éìš á'Ááéà·πá'áÁÁÒá°°áÁéééÍÒ
·ÒèÈÒÁÒÁ"Ò°Ñ'ì'ÉÒàÈÒÁ áÀÐ¼ÁÒμ¼ÁÑ§§Ò'á'é'éçÁ;ÁÐ°ç'ì;ÒÁá'ÒÁç;Ñ'ì;§Ò'çÒ"ÑÁçìš;ÁØèÁ'Òéá'éàÁÒèÁ§Ò'·Ò§'éÒ'ì;
ÈÑ;ÁÒ'·Áì ÁÙÁÒÁÑμ'·Òèà»ç'ì¼Ùé°Ø;à°Òì "Òì;áπÁ§;ÒÁ;ÒÁãé»ÀÐãÀ¹ì"ÒìçìšàÈÒÁÁ§§Ò'ìØμÈÒË;ÁÁÁÍÒÈÒÁ «Òè§á'éÁÑ
(AAECP) á'ìçÒÁÁèçÁÁ×ìçìš ASEAN Working Group on Food Waste Materials á'áÁÒèÁÁÁ; áÀÐÍÒ"ÒÁÁì·Ñé§ 2
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"Ò§á'éà»ÁÒèÁ¹á×èìà»ç'ìÈéìš»"Ò°ÑμÒ;ÒÁçÒ"ÑÁ'éÒ'ì;ÒÁ'Ñ'ì;ÒÁáÀÐãé»ÀÐãÀ¹ì"ÒìçìšàÈÒÁ (Waste Utilization and Managen
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"Òì;ÒÁçÒ"ÑÁáÀÐ¼Ñ²'ÒíÁèÒ§μéíá'×éìšÁÒà»ç'ìàçÁÒì;çèÒ 20 »Ò çìšÈÙ'Àì ECoWaste ·ÒèÈè§Ò'·Ò§'éÒ'ì;èÒ«°ÒÇÀÒ¼·Òèà
«Òè§á'ÒÁà»ç'ì¼ÁÒÁÑÑìÉ³Ð;ÒÁ¼ÁÒμìèÒ«°ÒÇÀÒ¼á'ÁçÒ"πçÒÁàçéÒã"·Ò§çÒ·ÁÒÈÒÈμÁíÁèÒ§á'é"ÁÒ§ ·Ò§ÈÙ'Àì ECoW
áÀÐÁÒà·πá'áÁÁÒá'ÁÐ'Ñ'ì;ØμÈÒË;ÁÁÁá'á'è'á'ÁÙÁÒÁÒπ'Òéçìšáíá²ÒÁ ÁÒ;ÒÁãé»ÀÐãÀ¹ì"Òì;ÒÁ'Ò°Ñ'ì'ÉÒàÈÒÁáÀÐ;ÒÁ¼

çÒÈÑÁ·ÑÈ'ì

ECoWaste ÁÒè§ÈÙèπçÒÁà»ç'ìÈÙ'Àì²Ñé¹¹ÒçìšÁÙÁÒÁÒπ á'ì;ÒÁ¼Ñ²'Òà·πá'áÁÁÒ;ÒÁ'Ñ'ì;ÒÁçìšàÈÒÁíØμÈÒË;ÁÁÁ;ÒÀà;ÉμÃ
áÀÐãà»ç'ìáÈÁè§¼ÁÑ§§Ò'·á'¹

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·Òì;ÒÁçÒ"ÑÁáÀÐ¼Ñ²'Ò à¼á×èì;ÒÁ»ÁÑ°»ÁØ§;ÁÐ°ç'ì;ÒÁ¼ÁÒμá'ìØμÈÒË;ÁÁÁ;ÉμÃáÈéÁÒ;ÒÁãé·ÁÑ¼ÁÒ;ÁíÁèÒ§ÁÒ»ÁÐÈ
á'Áà©¼ÒÐ·Òé'ì;ÒÁ'Ò°Ñ'ì'çìšàÈÒÁáÀÐ;ÒÁ¼ÁÒμìèÒ«°ÒÇÀÒ¼ á¼á×èìÉÁèÒ§ìšπìçÒÁÁÙé áÀÐà·πá'áÁÁÒ·ÒèàÈÁÒÐÈÁ ¼Ñ

à»éÒÈÁÒÀ

ÈÙ'Àì ECoWaste "ĐÁØèŞà'é'j;ÒÁÇÔ"ÑÁà¼xèl'j;ÒÁ¼Ñ²'Òà·mâ'áÁÁÔ'j;ÒÁÍl'j;áºº'j;ÒÁ¼ÁÔµj;éÒ«ªÒÇÀÒ¼·ÒŞÇÒÈÇj;ÁÁÁ ŞÒ'ÇÒ áÁĐ¼xé'º'Ò'·ÒŞ'éÒ'ÇÒÈÇj;ÁÁÁ à¼xèl'¼Ñ²'ÒáÈéÁĐºº·ÒŞÒ'á'éíÁèÒŞàµçÁ»ÁĐÈÒ·ÒÁÒ¼ÈÙŞÈØ' áÁĐà¼ÒèÁ»ÁĐÈÒ·ÒÁÒ' 1'j;"Ò'j;Ò'èÁÑŞÈÒj;ÈÒj;ÒÁ"Ñ'j;ÒÁçl'şàÈÒÁáÁĐj;ÒÁ'Òçl'şàÈÒÁá»áªé»ÁĐáÁª¹'j;ÁÇÁŋŌŞj;ÒÁÁ'»ÁÒÁÒ³çl'şàÈÒÁá'ÍØµÈÒÈj;ÁÁÁj; ÁÒà»éÒÈÁÒÀ·ÒèÈÒmÑ- à¼xèl'ÈéŞàÈÁÒÁj;ÒÁÇÔ"ÑÁáÁĐ¼Ñ²'Ò ŋèÒÁ·Í'·à·mâ'áÁÁÒá»ÈÙèj;ÒÁáªéŞÒ'á'áªÒŞ¼Ò³ÒªÁì ÁÇÁ·Ñ Á'j;ÒÁ¼ÒèŞ¼Òà·mâ'áÁÁÒ"Òj;µèÒŞ»ÁĐà·È Á'j;ÒÁ'ÒáçéÒ¼ÁÑŞŞÒ'áªxèl'¼ÁÒŞ áÁĐÁ'j;ÒÁÈÙ-àÈÒÁàŞÒ'µÁÒÍl'j;»ÁĐà·È à¼

j;ÁØèÁŞÒ'ÇÔ"ÑÁ (Key Research Areas)

ŞÒ'ÇÔ"ÑÁáÁĐ¼Ñ²'Òá'j;ÁØèÁ'Òèà'é' 4 á'Ç·ÒŞÈÁÑj; mxi

- j;ÁØèÁŞÒ'ÇÔ"ÑÁ'éÒ'¹"ØÁÒ'·ÁÒÁìÈÒj;ÈÒ (Microbiological and Biochemical Aspect) à¼xèl'ÈÒj;ÈÒçéíÁÙÁ¼xé'º'Ò'·ÒŞ'éÒ'¹"ØÁÒ'·ÁÒÁìáÁĐªÒçàµÁÒàj;ÒèÁÇj;Ñºj;ÁĐºç'j;ÒÁÁèíÁÈÁÒÁÈÒÁÍÒ'·ÁÒÁìá'ÈÁÒÇĐáÁèá áÁĐº·º·mÇÒÁÈÑÁ¼Ñ'j;çl'ş·ØÁÒ'·ÁÒÁìá'ÁĐººº'ÒÑ'¹éÒáÈÒÁªºªÁèªéíÒj;ÒÈ
- j;ÁØèÁŞÒ'ÇÔ"ÑÁ'éÒ'ŋŋŞ»-Òj;Á³j;¼Ñ²'Ò (Reactor and Process Development) 'Òà'Ò'ŞÒ'á'j;ÒèÁÇj;Ñºj;ÒÁ¼Ñ²'ÒŋŋŞ»-Òj;Á³j;ª¹ÈÒj;ÈÒà»ÁÒÁª·ÒÁº»ÁĐÈÒ·ÒÁÒ¼á'j;ÒÁººÑ'¹éÒáÈÒÁÈÒj;ÈÒáÁĐ¼Ñ²'Òj;ÁÁÁÇÔ·Òá'j;ÒÁáÁÒèÁµé'ÁĐºº (Start up) áÁĐ'Ù·ÉÍ»ÁĐÈÒ·ÒÁÒ¼j;ÒÁººÑ'¹éÒáÈÒÁª¹'ÒµèÒŞæ á'ŋŋŞ»-Òj;Á³j;ÈÒj;ÈÒáÁĐ¼Ñ²'ÒŋŋŞ»-Òj;Á³j;Ò'Ñ'j;èÒ«áíá'Áà'¹«ÑÁà'j;íá'j;èÁÇÁ·ÑéŞçÁÒÁ¼Áj;ÒÁÇÔ"ÑÁ·Òèá'é"Òj;ÈéíŞ»-ÒºÑµÒj;ÒÁà¼xèl'Òá»ªªé"ÁÒŞá'ÁĐ'Ñºj;ØµÈÒÈj;ÁÁÁ
- j;ÁØèÁŞÒ'ÇÔ"ÑÁ'éÒ'ÁĐººmÇºmÇÁáÁĐáºº"ÒÁÍŞ·ÒŞm³ÒµÈÒÈµÁì (Computational Aids and Process Optimization) 'Òà'Ò'ŞÒ'á'·ÒèÈÒÁÒÁŋŋ·Ò'ÒÁÈÁÒÇĐá'ÁĐººº'ÒÑ'¹éÒáÈÒÁªºªÁèªéíÒj;ÒÈá'éíÁèÒŞáÁè'ÁÒáÁĐÁÇ'áÁÇç áÁĐ¼Ñ²'ÒÁÙ»áººj;ÒÁmÇºmÇº
- j;ÁØèÁŞÒ'ÇÔ"ÑÁ'éÒ'ÈÒèŞáÇ'ÁéíÁáÁĐj;ÒÁ"Ñ'j;ÒÁ (Environmental Research and Management) ÈÒj;ÈÒŋŋŞmÇÒÁà»ç'á'é áÁĐmÇÒÁáÈÁÒĐÈÁçl'şj;ÒÁ'Òà·mâ'áÁÁÒ·Òèá'é"Òj;ÈéíŞ»-ÒºÑµÒj;ÒÁá»ÈÁéÒŞáÁĐªªéŞÒ'·ÁÒŞá'ÁĐ'Ñºj;ØµÈÒÈj;ÁÁÁ ÈÒj;ÈÒáÁĐ»ÁĐàÁÒ'¼Áj;ÁĐ·ºçl'şj;ÒÁj;èíÈÁéÒŞÁĐººº'ÒÑ'¹éÒáÈÒÁ·ÑéŞá'áŞèÈÁÒÇĐáÇ'ÁéíÁ àÈÁÈºj;Ò" áÁĐÈÑŞmÇÁÈÒj;ÈÒáÁÁÇÁ·ÑéŞj;ÒÁµÒ'µÒááÁĐµÁÇ"»ÁĐàÁÒ'áÁŞŞÒ'ÍØµÈÒÈj;ÁÁÁ ÁĐººº'ÒÑ'¹éÒáÈÒÁªºµèÒŞæ·ÑéŞá'áŞèj;ÒÁªªé·ÁÑ¼ÁÒj;Á j;ÒÁ

ŞÒ'ÒÁÒj;ÒÁáÁĐáÈÈéªº»ÁÒj;ÈÒ'éÒ'ÈÒèŞáÇ'ÁéíÁ

ÇÑµŋŋØ»ÁĐÈŞmì

ÈÙ'ÀìmÇÒÁà»ç'á'ÁÒÈèàºçºÒĐ·ÒŞ'éÒ'j;ÒÁ"Ñ'j;ÒÁáÁĐªªé»ÁĐáÁª¹"Òj;çl'şàÈÒÁÍØµÈÒÈj;ÁÁÁj;ÒÁàj;ÈµÁ ÁÒÈèç'j;ŞÒ'ÒÁÒj;ÒÁÇÔ

- ÈèŞàÈÁÒÁj;ÒÁáªéíŞmìçÒÁÁÙèá'j;ÒÁ"Ñ'j;ÒÁáÁĐªªé»ÁĐáÁª¹"Òj;çl'şàÈÒÁá'Áà'é'ÍØµÈÒÈj;ÁÁÁj;ÒÁàj;ÈµÁ 'éÇÁà·mâ'áÁÁÒj;ÒÁà¼xèl'ÁÈèá'è¼ÁÑŞŞÒ'Òj;èÒ«ªÒÇÀÒ¼áÁĐªèÇÁÁÑj;ÈÒÈÒèŞáÇ'ÁéíÁ
- ºÁÒj;ÒÁáÁĐáÈÈéªº»ÁÒj;ÈÒ'éÒ'j;ÒÁ"Ñ'j;ÒÁÈÒèŞáÇ'ÁéíÁ µÁí'á»ç'·Òè»ÁÒj;ÈÒá'j;ÒÁÍl'j;áººÁĐººº'ÒÑ'¹éÒáÈÒÁ
- ÁÑº·ÉÍºáÁĐÈÒj;ÈÒçÔ"ÑÁÁèÇÁj;ÑºÉ'èÇÁŞÒ'µèÒŞæ·ÒèÈ'á"

- à»ç¹È¹èÇÀŞÒ¹»ÃÐÊÒ¹ŞÒ¹áÃÐ¹Ñ¹½Ö;í°ÃÁ à¾¼×èÍ¶èÒÁ·Í¶ÇÒÁÃÙéáÃÐ»ÃÐÊ°;ÒÃ³¹Ò;¼ÙéàªÕèÃÇªÒ-ÊÙè;ÒÃªªéŞÒ¹»ÃÔŞ

;ÒÃÍ;á°°

- ÃÑ°»ÃÐàÁÒ¹áÃÐÊÒ;ÉÒ¶ÇÒÁà»ç¹ä»ä´éã¹;ÒÃ;èÍÊÃéÒŞÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- ãËé¶Ó»ÃÖ;ÉÒ Í;á°° áÃÐ;èÍÊÃéÒŞÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- ãËé¶Ó»ÃÖ;ÉÒ´éÒ¹;ÒÃªªé»ÃÐàÃ¹¹¹Ò;èÒ«ªÕÇÀÒ¾¼

;ÒÃãËé¶Ó»ÃÖ;ÉÒ

- ãËé¶Ó»ÃÖ;ÉÒã¹;ÒÃ¶Ç°¶ØÁ´ÙáÃ;ÒÃ´Óà¹Ò¹ÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- ÃÑ°´ÙáÃáÃÐµÒ´µÒÃÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- µÃÇ»»ÃÐàÁÒ¹áÃÐª;éäçÃÐ°°°ÓÑ¹´éÓàÊÕÃ·ÕèÃéÁàÊÃÇ

- ãËé¶Ó»ÃÖ;ÉÒã¹;ÒÃàÃÕèÁµé¹ÃÐ°°°ÓÑ¹´éÓàÊÕÃ (Startup)

- ãËé¶Ó»ÃÖ;ÉÒã¹;ÒÃ´Óà¹Ò¹;ÒÃÁ´;ÒÃªªéÊÒÃà¶ÁÕã¹ÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- à»ç¹µé¹

·É¹ªÃÐ»ÃÐàÁÒ¹¼Ã

- ·É¹ªÃÐ»ÃÐàÁÒ¹¶ÇÒÁÊÒÁÒÃ¶¹;ÒÃ¼ÃÔµ;èÒ«ªÕÇÀÒ¾¼Ò;ÇÑÊ´Ø çÍŞàÊÕÃµèÒŞæ

- ·É¹¶ÇÒÁà»ç¹¾¼ÔÉçÍŞÊÒÃµèÒŞæµè;ÃÐ°Ç¹;ÒÃ¼ÃÔµ;èÒ«ªÕÇÀÒ¾¼

- ·É¹;ÒÃÃéÍÃÊÃÒÃçÍŞàÊÕÃ·ÕèÊÃÒÇÐµèÒŞæ ã¹ÃÐ¹Ñ°ÊéÍŞ»Ò°ÑµÒ;ÒÃ

- ÃÑ°µÃÇ»»ÃÐàÁÒ¹»ÃÐÊÒ·ÒÀÒ¾¼çÍŞÃÐ°°°ÓÑ¹´éÓàÊÕÃ

- µÃÇ»»ÃÐàÁÒ¹;ÒÃªªé·ÃÑ¾¼Ò;Ã áÃÐ;ÒÃ¼ÃÔµçÍŞàÊÕÃçÍŞÃÐ°°µèÒŞæ

- á;éäç Á´;ÒÃ;èÍãËéà;Ò´çÍŞàÊÕÃã¹çÑé¹µ¹µèÒŞçÍŞ;ÃÐ°Ç¹;ÒÃ¼ÃÔµ

- à»ç¹·Õè»ÃÖ;ÉÒã¹;ÒÃ»ÃÑ°»ÃØŞ;ÃÐ°Ç¹;ÒÃ¼ÃÔµ à¾¼×èÍÁ´»ÃÒÁÒ³çÍŞàÊÕÃ

- à»ç¹·Õè»ÃÖ;ÉÒã¹;ÒÃ¹Ñ¹;ÒÃçÍŞàÊÕÃáÃÐ;ÒÃªªé»ÃÐàÃ¹¹çÍŞàÊÕÃ

í°ÃÁ/ÊÑÁÁ¹Ò

- ÃÑ°Ñ¹½Ö;í°ÃÁ ÊÑÁÁ¹Ò ;ÒÃªªé»ÃÐàÃ¹¹¹Ò;çÍŞàÊÕÃ»ÃÐàÃ·µèÒŞæ

Activity of Biofilm During Start-Up Period of Anaerobic Hybrid Reactor at Low and High Upflow Feeding Velocity ”, *Water Science and Technology*, 48(8): 79-87.

- Chaiprasert, P., Suvajittanont, W., Suraraksa, B., Tanticharoen, M., and Bhumiratana, S. (2003) “ Nylon Fiber as Supporting Media in Anaerobic Hybrid Reactors: Its Effects on System's Performance and Microbial Distribution ,” *Water Research*, 37: 4605-4612.

- Suvajittanont, W. and Chaiprasert, P. (2003) “ Potential of Biogas Recirculation to Enhance Biomass Accumulation on Supporting Media ,” *Bioresource Technology*, 88 (2003), 157-162.

- Suraraksa, B., Nopharatana, A., Chaiprasert, P., Tanticharoen, M. and Bhumiratana, S. (2003) “ Effect of Substrate Feeding Concentration on Initial Biofilm Development in Anaerobic Hybrid Reactor ,” *ASEAN Journal on Science and Technology for Development*, 20(3-4): 361-372.

- Sanpoti, N., Towprayoon, S., CHAIPRASERT, P., and Nopharatana, A. (2006) “ Enhancing Waste Decomposition and Methane Production in Simulated Landfill Using Combined Anaerobic Reactors,” *Water Science and Technology* ”, 53 (8): 243-251.

- Sanpoti, N., Towprayoon, S., CHAIPRASERT, P., and Nopharatana, A. (2006) “ The Effects of Leachate Recirculation with Supplemental Water Addition on Methane Production and Waste Decomposition in a Simulated Tropical Landfill ,” *Journal of Environmental Management*, 81: 27-35 .

- Boonapatcharoen, N., Meepian, K., Juproputtasri, W., Chaiprasert, P. and Sechkarnjanarak, S. (2006) “ Microbial Population During Operation Periods of Anaerobic Hybrid Reactor Treating Cassava Starch Wastewater ”, *IWA World Water Congress Beijing* , China , 10-14 September.

- Boonapatcharoen, N., Wanichpongpan, P., Ruenglerpanyakul, W., and Techkarnjanaruk, S. (2006) “ Effect of Natural Sunlight on Microbial Population in Shrimp Farming Sediment ”, *In Proc. International Conference on Environmental and Public Health Management*, Hong Kong, People Republic China, 7 December.

- Suraraksa, B., Meepian, K. and Chaiprasert, P. (2007) “ Microbial Population and Microbial Activity as Indicating Factor for Controlling Anaerobic Hybrid Reactor (AHR) ”, *The Conference Water Micro 2007*, Japan, 9-15 Sep, 2007.

- Boonapatcharoen, N., Meepian, K., Chaiprasert, P. and Techkarnjanaruk, S. (2007) “ Molecular Monitoring of Microbial Population During Operation Periods of Anaerobic Hybrid Reactor Treating Cassava Starch Wastewater ” , *Journal of Microbial Ecology*. Vol.54: 21-30.

- Phalakornkule, C., Wongnoi, R. and Songkasiri, W. (2007) “ Influence of a Three-Phase Separator Configuration on the Performance of a UASB Reactor Treating Wastewater from a Fruit Canning Factory ”, *Journal of Water Environment Research*. 79(2), 199-207.

- Songkasiri, W., Sasadoor, W., Wisitrungruang, W., Tipwong, S. and Nopharatana, A. (2007) “ Increase of Dewatering Efficiency and Starch Recovery using Extractors in Pulp Management for a Native Cassava Starch Production Factory ”, *International Symposium on Air Quality and Waste Management for Agriculture*, Broomfield, CO, USA, September 15-19.

- Saengchan, K., Wisitrungruang, W., Sasadoor, W., Nopharatana, A. and Songkasiri, W (2007) “ Reducing Sulfur Residue in Tapioca Starch Product ”, *Tapioca Eco-Industrial Cluster in Vietnam*, Ho Chi Minh City, Vietnam, August 28-29.

- Somboonchai, W., Songkasiri, W., Nopharatana, M. 2007. “ Kinetics of Cyanide Oxidation by Ozone in Cassava Starch Production Process ”, *Journal of Food Engineering*. 7 July 2007 . published on-line.

- Suraraksa, B., Kullavanijaya, P., and CHAIPRASERT, P. (2008) “ Accelerating Biofilm Formation on Supporting Media for Reducing Start-up Period of Anaerobic Hybrid (AH) Reactor ,” *Biofilm Technologies Conference*, January 8-10, Nanyang Executive Centre , Nanyang Technological University (NTU) campus , Singapore .

-

- Suraraksa, B., Nopharatana, A., CHAIPRASERT, P., and Tanticharoen, M. (2008) “ Aspect of Initial Biofilm

Development of Mixed Culture in Anaerobic Hybrid (AH) Reactor at Low and High Upflow Feeding Velocities ,” Biofilm Technologies Conference, January 8-10, Nanyang Executive Centre , Nanyang Technological University (NTU) campus , Singapore.

-

- Laowansiri, S., Vinitnantharat, S., Chaiprasert, P. and Ha, S.R., 2008, “ Anaerobic Degradation Kinetics of Reactive Dye with Different Carbon Sources ,” Journal of Environmental Biology , 29(3), 309-314.

ÃĐ·Ñ°»ÃĐà·È

- Chaiprasert, P., S. Bhumiratana and M. Tanticharoen (2001) “ Mesophilic and Thermophilic Anaerobic Digestion of Pineapple Cannery Wastes ,” Thammasat International Journal of Science and Technology, Vol. 6 (2): p. 1-9.

- Pantamas, P., Chaiprasert, P. and Tanticharoen, M. (2003) “ Anaerobic Digestion of Glucose by Bacillus Licheniformis and Bacillus coagulans at Low and High Alkalinity ”, Asian Journal of Energy and Environment, 4(1-2): 1-17.

- Tran, T.T., Nopharatana, A. and Chaiprasert, P. (2003) “ Performance of Anaerobic Hybrid and Mixing Reactors in Treating Domestic Wastewater ,” Asian Journal of Energy and Environment, 4(1-2): 19-39.

- Deddoung, M., Suraraksa, B., and CHAIPRASERT, P. (2007) “Enhancement of Biofilm Development at Initial Strat-up Period of Various Feeding Velocities and Substrate Concentrations,” NSTDA Annual Conference (NAC 2007): Science and Technology for National Productivity and Happiness, 28-30 March, Science Park, Phatumthani, Thailand .

- Petchsri, P., Towprayoon, S., CHAIPRASERT, P., and Nopharatana, A. (2006) “ The Effect of Precipitation on Municipal Solid Waste Decomposition and Methane Production in Simulated Landfill Bioreactor with Leachate Recirculation ”, Songklanakarin Journal Science and Technology, 28(3): 615-631.

- Chaiprasert, P. (2006) “Technology Transfer on Biogas Technology: Wastewater to Energy by Anaerobic Fixed Film System” Proceeding The 18 th Annual Meeting of the Thai Society for Biotechnology “Biotechnology: Benefits & Bioethics” November 2-3, The Montien Riverside Hotel Bangkok , Thailand .

- Kullavanijaya, P., Paepatung, Loapitinan, O., N., Songkasiri, W., Nopharatana, A., and CHAIPRASERT, P. (2007) “ An Overview of Status and Potential of Biomethanation Technology in Thailand ,” KMUTT Research and Development Journal, Special Issue 30(4), 693-700.

-

- Petchrungchruang, U., Songkasiri, W., and CHAIPRASERT, P., 2008, “ Water Quality Classification for Rasper, Extractor and Separator as a Key Indicator Index for Water Consumption in Tapioca Starch Factory ,” The Proceedings of 4 th Naresuan Environmental Annual Conference, May 26-27, Naresuan University , Payao , Thailand .

-

- Phutarak, P., Songkasiri, W., and CHAIPRASERT, P., 2008, “ Secondary Wastewater Treatment of Cassava Starch Factory Using Horizontal Subsurface Flow Constructed Wetland ,” The Proceedings of 4 th Naresuan

Environmental Annual Conference, May 26-27, Naresuan University , Payao , Thailand .

- Eksomthramate, T., Songkasiri, W., and CHAIPRASERT, P., 2008, "Hydrolysis of Cassava Peels and Pulps from Cassava Starch Processing for Ethanol Production", The Proceedings of 4 th Naresuan Environmental Annual Conference, May 26-27, Naresuan University , Payao , Thailand .

à»ç¹µé¹

§Ò¹ÇÔÑÁ·Õè´Òà¹Ô¹;ÒÃã¹ªèÇ§»Õ ¼.È . 2549-2551

- à»ç¹µé¹;ÒÃÈè§àÈÁÒÁ;ÒÃ¼ÁÔµ;èÒ «àÒÇÀÒ¾à¾×èìà»ç¹¾ÁÑ§§Ò¹.´á.¹ã¹ãÁ§§Ò¹ÍØµÈÒÈ;ÁÁÁ;ÒÃà;ÉµÃ
- ;ÒÃÈè§àÈÁÒÁ;ÒÃà;Ò´;ÒÁiÁªÒÇã¹ªèÇ§àÁÒèÁµé¹ÁÐºººÓÑ´¹éÒàÈÕÁãÁéÍÒ;ÒÈàººÀÙ;¼ÉÁ
- ;ÒÃµÃÇ´´ÉÍºµÔ´µÒÁ;ÁÐèÁ»ÁÐººº;Á´ØÁÔ¹·ÁÕÁi Syntrophic Acetogenic Bacteria à¹ÁÐºººÓÑ´¹éÒàÈÕÁãºººÁéÍÒ;ÒÈà´Áãªé 1 hybridization
- ;ÒÃÇÁÒÁÔ´Ò´ÇÍ§¶Ñ§»´Ò;Á³iÉÓÈÑº;ÒÃ¼ÁÔµ;èÒ «àÒÇÀÒ¾à´Áãªé·ÁÉ®Ò;ÒÃÓ¹Ç¾¾ÁÈÒÈµÃiÇÍ§àÈÁ Computational fluid
- ;ÒÃ»ÁÐÁØµ;µiãªé¶Ñ§»´Ò;Á³iãÁèãªéÍÒ;ÒÈàººÀÙ;¼ÉÁÉÓÈÑº;ÒÃ¼ÁÔµ;èÒ «àÒÇÀÒ¾à´ÁÐºººÓÑ´¹éÒàÈÕÁ´Ò;àÁ§§Ò¹ÍØµÈ
- ÁÙ»áºº;ÒÃàÁÒèÁµé¹ÁÐºº.ÒèàÈÁÒÐÈÁµè;ÁÐèÁ´ØÁÔ¹·ÁÕÁiã¹;ÒÁiÁªÒÇ à¾¾×èìÈè§àÈÁÒÁ»ÁÐÈÒ.ÒÀÒ¾;ÒÃ·Ò§Ò¹ÇÍ§¶Ñ§
- á¹Ç·Ò§;ÒÃÁ´;ÒÃÈÙ·àÈÕÁá»é§ÁÑ¹ÉÓ»ÐÈÁÑ§´éÇÁã¾Éã «à»Á¹
- ;ÒÃ¾¾Ñ²¹Òãíá´Áã «à»Á¹à¾¾×èìà¾ÒèÁ»ÁÐÈÒ.ÒÀÒ¾;ÒÃáÁ;á»é§ÉÓÈÑºÉ¹èÇÁáÁ;á»é§ÁÑ¹ÉÓ»ÐÈÁÑ§
- ¼ÁÇÍ§ÁÐÁáÁÐÇÒÁaÁÇÇÇÍ§¹éÓ©Õ´á¹;ÒÃÈ;Ñ´á»é§ÇÍ§;ÁÐºÇ¹;ÒÃ¼ÁÔµá»é§ÁÑ¹ÉÓ»ÐÈÁÑ§
- áºº·ÓÁÍ§·ÒÁà¾¾×èìÇºººµÔÁ;ÁÐºÇ¹;ÒÃiáÉè§á»é§ÁÑ¹ÉÓ»ÐÈÁÑ§
- à»ç¹µé¹;ÒÃÇÔÑÁáÁÐ¾¾Ñ²¹Ò;ÁÐºÇ¹;ÒÃ¼ÁÔµá»é§ÁÑ¹ÉÓ»ÐÈÁÑ§à¾¾×èìà¾ÒèÁ»ÁÐÈÒ.ÒÀÒ¾;É¹èÇÁ¼ÁÔµ áÁÐÁ´;ÒÃãªé·Á
- ;ÒÃÈÒ;ÉÓÈÑ;ÁÀÒ¾¾ªÒÇÁÇÁÉÓÈÑº¼ÁÔµ;èÒ «àÒÇÀÒ¾à¹»ÁÐà·Èã·Á
- ;ÒÃÈÒ;ÉÓÈÑ;ÁÀÒ¾¾ªà·ª¹áÁÁÒÈÓÈÑº¼ÁÔµ;èÒ «àÒÇÀÒ¾»Ò;ÒÇÁÇÁã¹»ÁÐà·Èã·Á
- ;ÒÃÈÒ;ÉÓº¹Ò´áÁÐ;ÒÃà»ÁÒèÁ´á»Á§ÇÍ§´ØÁÔ¹·ÁÕÁiã¹ºèìàÁÒèÁ§;Øé§áºººÑ²¹Ò
- ;ÒÃÈÒ;ÉÓºººÓÁÍ§´Á¹ÈÒÈµÃiÇÍ§;ÒÃÁéiÁÈÁÒÁÇÍ§àÈÁÒ·ÒèÁÓÍ§µi»ÁÐ;íºà«ÁÁÙáÁÈà»ç¹ÉÁÑ;à¾¾×èì;ÒÃ¼ÁÔµÁÒà¹
- ;ÒÃµÃÇ´´ÉÍºªª×èì´ØÁÔ¹·ÁÕÁi·ÒèÁÒªÒÇÔµá´Áãªé carboxyfluorescein diacetate (cFDA) à¾¾×èìãªéã¹;ÒÃ»ÁÐàÁÔ¹ªØ³ÉÁÑµÔÇÍ§àªª×èì´ØÁÔ¹·ÁÕÁiµÑé§µé¹ÉÓÈÑºÁÐºººÓÑ´¹éÒàÈÕÁãºººÁèãªéÍÒ;ÒÈ
- ;ÒÃ»ÁÐàÁÔ¹à·ª¹áÁÁÒáÁÐÈÑ;ÁÀÒ¾¾àÈÈÇÑÈ´Ø·Ò§;ÒÃà;ÉµÃáÁÐ¾¾×ª»ÁÙ;à¾¾×èì¾¾ÁÑ§§Ò¹ÉÓÈÑº;ÒÃ¼ÁÔµ;èÒ «àÒÇÀÒ
- ;ÒÃãªé¶Ñ§»´Ò;Á³iáººÀÙ;¼ÉÁã¹;ÒÃºººÓÑ´¹éÒà¾¾×èìÈÁØ¹àÇÒÁ¹¹Ó;ÁÑºÁÒãªéã¹ãÁ§§Ò¹á»é§ÁÑ¹ÉÓ»ÐÈÁÑ§ã¹ÁÐ´ÑºÍØµÈÒÈ
- ;ÒÃÈÒ;ÉÓ»ÁÐººº;Á´ØÁÔ¹·ÁÕÁi·Òèà;ÒèÁÇÇÇÍ§;Ñº;ÒÃà;Ò´;Ñ´;Áéi¹ÇÍ§·èiÈè§;èÒ«·ÁÁªºººµÔ´éÇÁà·ª¹ÒªÒÇÇÒ·ÁÒàÁàÁ;Ø
- ;ÒÃ·ÒÇÒÁÉÐÍÒ´;èÒ «àÒÇÀÒ¾à´ÁÇÒ,Õ·Ò§ªÒÇÀÒ¾à´éÇÁ Biofilter

- à»ç¹µé¹

°ØκκΑΌ;Ã

κ³Đ.Õè»ÃÖ;ÉÒ

- ÈÒÊµÃÒ"ÒÃÂì 'Ã. ÁÃµ µÑ¹µÔà"ÃÔ-
- ÃÍŞÈÒÊµÃÒ"ÒÃÂì 'Ã. ÈÑ;ÃÔ¹.Ãì ÀÙÁÔÃÑµ¹
- ÃÍŞÈÒÊµÃÒ"ÒÃÂì 'Ã. ÊØÇÔ.Âì àµÕÂ
- ÃÍŞÈÒÊµÃÒ"ÒÃÂì 'Ã. âÊìÊ ÊØÇÃÃ³Ã×¹
- ÃÍŞÈÒÊµÃÒ"ÒÃÂì °ØÉÂÒ °Ø¹¹Òκ
- ÃÍŞÈÒÊµÃÒ"ÒÃÂì 'Ã. ÀÒÇÔ³Õ °ÑÃ»ÃĐàÊÃÔ°

¼ÙéíÓ¹ÇÂ;ÒÃÈÙ¹Âì ECoWaste

- 'Ã. ÍÃÃ³¼ ¹¼ÃÑµ¹ì

κ³Đ.ÓŞÒ¹

- 'Ã. °Ô¹¼ŞÈì ÇÑŞã¹
- κØ³"Ş;Ã ¼Ù¹.ÇÕ
- κØ³¹Ñ¹.ÔÃÒ à»»ĐµÑŞ
- κØ³»ÃĐ.Ô¹ ;ØÃÃĐÇ³ÔªÂì
- κØ³ÇÒÃÔ¹ ÃÑ;ÃèÇÁ
- κØ³à;ÉÔ.Ôì à"ª¼ÔÃÔªÑÃ
- κØ³¹ÔÃÒÃ"Õ °Ø-ÍÒ¼Ñ.Ôìà"ÃÔ-
- 'Ã. ÇÃ;ÃÉ ÊØÇ"ÔµµÒ¹¹.ì *
- 'Ã. ÊÃà;ÔÃÃµÔ àµª;Ò-"¹ÒÃÑ;Éì *
- 'Ã. à°-"¼Ã ÊØÃÒÃÑ;Éì *
- 'Ã.ÇÃÔ¹,Ã ÊŞκÈÔÃÔ*

- 'Ã.ÃÒÃÔ'Õ ÃÕâ.ªÇÃÔµ *
- ¢Ø³ÇØ²Ô³¼§Èì ÈÃÕ.Í§¢Ó *
- ¢Ø³¼Ã³¼ÃÃ³ ¼Ò³ÔªÃì'ÓÈÔ¹ *

* °Ø¢¢ÃÒ;ÃÃÒÃãµé¢ÇÒÃÃèÇÃÃÍ;Ñ°ÈÙ¹Ãì³¼Ñ¹,ØÇÕÈÇ;ÃÃÃáÃÐà.¢â¹ãÃÃÕªÕÇÃÒ³¼áÈè§ªÒµÔ

.ÕèíÃÙèµÔ´µéí

ÈÙ¹Ãì¢ÇÒÃà»ç¹àÃÕÈà©¼ÒÐ.Ò§´éÒ¹;ÒÃÑ´;ìÒÃ áÃÐãªé»ÃÐãÃ¹ì"Ò;çÍ§àÈÕÃÍØµÈÒÈ;ÃÃÃ;ÒÃà;ÉµÃ
 ÁÈÒÇÔ.ÃÒÃÑÃà.¢â¹ãÃÃÕ³¼ÃÐ"ÍÃà;ÃéÒ,¹ºØÃÕ
 àÃç.Õè 83 ÈÃÙè 8 áçÇ§.èÒçéÒÃ
 àçµºÒ§çØ¹à.ÕÃ¹ ;ÃØ§à.³¼ÃÈÒ¹¢Ã 10150

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