

The Association of Chinese Food Scientists & Technologists in America

旅美中國食品科技學會

會誌



NEWSLETTER

VOL. 4, NO. 2

JANUARY, 1982

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NEWSLETTER



VOL. 4, NO. 2

JANUARY
1982

1981-1982 OFFICERS

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For membership application and other information, please contact one of the above members.



編者的話

- 本期各 Committee 之進展報告由會長綜合報導。
- Consulting Committee 最近編印了一份小冊，對介紹 ACFSTA 服務之範疇。
- 為了履行 Publication Committee 之諾言本期嚐試刊登一些各類短文，希望各位踴躍參與。
 - 前數期曾有會友將自己的心得及建議提供給求職的會友們參考，本期特轉載兩篇短文做為此一問題之綜合解答。
 - 歷年來會友們陸續地進入各大公司及研究機構，希望藉此園地繼續向會友們介紹一些未曾在 Newsletter 上出現的機構，本期推介紹介 Anderson Clayton Co.
 - 專技方面的文字，特請 Sherman Lin 及 Tony Chen 分別就味道及程序發展為題和大家淺談一番，願會友們能主動地將自己的專長心得在此和大家分享。
- 經濟部李季先生來要求會友們對國內所提的 14 項食品科技問題提供個人的寶貴意見，最近李先生又來一信提及 10 項研究計劃，ACFSTA 將於近期內向李先生推薦各項之專家，以供國內參考。
- Overseas Chinese Packaging Institute 的譚光霖先生來函，希望對包裝有興趣的會友們多予支持，並和譚先生直接連絡。
- 對謝已交會費的會友們，此期特地附上會費單，希望未交會費的會友們能馬上行動。

Letter From President of ACFSTA

各位會員：

陽曆年剛過，陰曆年將到，在此向諸位拜年，大家新年快樂升官發財。

本會81/82年度已過去一半，年初時所訂下的工作計劃，大部份已順利的推動起來。這些完成實歸功於各委員會的主席以及各委員們之操心及貢獻。在此特向所有參與工作的會員們致最深的敬意及感謝。

下面所提簡單的報告各委員會工作進展的情形：

1. 教育委員會 - 主席 張天德

已訂下二十個左右的專題，並找到各專題訓練班之召集人。資料已寄回台灣給啟傑之柯長及李喬先生。目前台灣方面正作意見調查，以決定那行專題為台灣食品界所最需要的。

2. 顧問委員會 - 主席 陳永筠

已制定顧問工作之聲程並印刷成冊。正與台灣以及大陸方面聯絡。本委員會之技術顧問以華人食品業為對象，不論其故為

正均。除上述三地，尚希望工作範圍可
擴展及美國本土，加拿大以及東南亞各地
之華人從事於食品生意者。

3. 出版委員會 - 主席 萬建心

萬兄身兼數職：祕書及財務。工作繁雜。
通訊之出刊期有延誤。尚望會員們雅諒。
本期通訊有一篇研究心得，作為拋磚
引玉之用。希望會員們踴躍的參加。
將各人的心得寫出來大家互相琢磨，以
增進彼此的瞭解並提高本刊的
水準。

4. 三會委員會 - 主席 林耀正

正的林耀正部長聯絡備用會及坊內，以
舉辦討論會。討論中之論題均是「自我
改進 Self Improvement」。如在學會員們獲
如何選課，選擇導師教授。將來才比較容
易找事。在職的會員們甚多覺得升等
升級似有被歧視之可解，真正原因
值得探討。如何改進自己以到升官之
便亦是很多人所關心之題目。

中式餐館競爭激烈時，計劃改為辦民
抽會或西式中餐，以便將空閒的時間
用在更有意義的行動上。

5. 籌款委員會 - 主席 林信蘭

對外籌款尚未進行。團體會員有二行公司；台灣之大成長物公司以及紐約 Dr. Louis Lu 主持的 Jadeine Food Products, Inc. (玉殿鼓油公司)。各繳會費 \$200.00。會費繳交的增處，目前已繳者有：贊助會員 7，聯業會員 23，學生會員 13，共收會費 \$1020.00 ($2 \times 200 + 7 \times 30 + 23 \times 15 + 13 \times 5$)。因事忙忘記繳費的會員們，請儘快收到本刊時，即將會費寄出來，多謝。

6. 就業輔導委員會 - 主席 呂子義

有幾位同學來信詢問就業機會，希望社聯會員們有什麼由嘉消息，作早通知呂子義，他的新電話是 (212) 739-2470。

7. 社外活動

旅美中國化學會 (CCACA) 以及包裝學會皆與本會聯絡，希望建立學會間之關係。此二個之工作已在推動中。本會會員若有興趣加入上列二學會者，請直接與他們聯絡。地址在複印的信上。

台灣經濟部查查先生，向大部份會員們發出信函，提出十四項產品之各種問題。希望諸位就若人之所知及所能踴躍的提出建議。因此案並非正式向本會之顧問委員會提出，本會暫不以團體之身份作答。

8. 其他事項

有不滿意會員提出下列建議：(a) 合表任期改為二年 (b) 成立 Award Committee, 二種獎, 一種是成就獎, 贈與本會會員在食品界俱有相當之成就或聲望者。另一種是服務獎, 贈與本會執行會長。(c) 成立選舉委員會, 負責本會選舉事務。對於這些建議, 請任者有寶貴的意見, 請儘量提出來, 以便解等們作下一步決定時之參考。

林信南

Jan. 1982.

希望會友們能將本會向您認識的朋友們推薦。
若需要報名表請通知秘書萬建心先生。

Peter J. Wan
Anderson Clayton Foods
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Richardson, TX 75080

INTRODUCTION

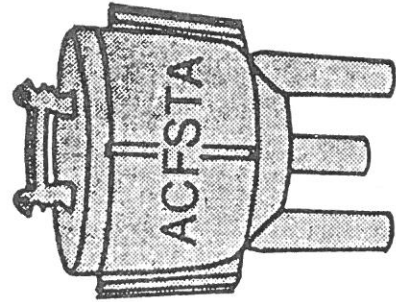
The Association of Chinese Food Scientists & Technologists in America (ACFSTA) is a technical, non-profit organization. The Association has about two hundred highly trained and experienced food scientists, food technologists, food engineers and professors. About half of our members possess Ph.D. degrees, and most of the other members have post-graduate training.

Our members are involved in various facets of food industry, such as: fats and oils, dairy, meat, vegetable proteins, corn syrup, beverage, fruit and vegetable, flavor and fermentation. These are only a few of the examples. Our members are also involved in different operational aspects within their employers. For example, we have members in Research and Development, Quality Assurance, Production and Technical/Operational Management. A good number of our members serve the academic community. There are also members who are with the U.S. and Canadian Government Research.

OBJECTIVE

The purpose of providing the consulting service is twofold. First, the consultation will provide an excellent opportunity for the Association to serve the Asian Countries, particularly the Mother Country. This has been and will be one of the major principles of our organization. Second, ACFSTA is a non-profit organization; therefore, this consulting service will be a means for the organization to be self-sufficient, and to be more effective for providing services internally and externally.

It is the policy of our Association that the consultation provided by our members will not be a conflict of interest to their present employers. For each service provided by the ACFSTA, a team will be formed, although the actual service may either be provided by one of the members or a team.



SERVICES

- A. Research & Development
 - 1. new product development
 - 2. process development
 - 3. analytical method development
 - 4. quality assurance
 - 5. feasibility study
 - 6. research program assessment
 - 7. R&D management
 - 8. laboratory and pilot plant design
 - 9. sensory evaluation
 - 10. toxicology
 - 11. experimental design and optimization with computer technology
- B. Production
 - 1. production management
 - 2. quality control
 - 3. sanitation
 - 4. wastewater and air-pollution management
- C. Engineering
 - 1. plant design and evaluation
 - 2. plant construction
 - 3. equipment and instrumentation recommendations
 - 4. energy conservation
 - 5. packaging
 - 6. feasibility study
 - 7. process control
- D. Information
 - 1. market research
 - 2. literature and patent searches
 - 3. regulatory/legal service
 - 4. trade and scientific associations
- E. Education
 - 1. seminar
 - 2. workshop
 - 3. short course

When the consulting area is beyond our members' expertise, referral of the problem to the appropriate specialist outside of ACFSTA will be done via our well established contacts throughout the food industry.

FEE

Basically, the fee for consultation is negotiable. It depends on the type and length of the service. An average of 200-300 U.S. dollars per day of service plus travel expenses can be used as a guideline. Twenty-five percent of the consulting fee will be donated to ACFSTA as operating fund, and the seventy-five percent will be paid to the consulting member or consulting team. Many services can be provided without travel expenses, depending on the nature of the consultation.

CONTACT

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台灣科工學會舉辦首次座談會

講解如何在美國求職

態度應不卑不亢·要表現成熟上進

【本報記者郭淑敏洛杉磯訊】求人、人求事，是這個工商社會每天都存在的現象。那麼找事應該怎麼找？願主如何去找他所需要的人？

台灣科工學會廿一日下午，針對這個問題在加州理工學院舉辦了一項演講座談會，由會長洪盛奎主持，並邀請李正吉、郭榮俊主講。

洪會長表示，這項演講，主要是為由台灣來美國深造或移民來美的人，希望在美國公司找事而舉辦的。

首先由李正吉博士介紹有五百名員工以上的美國大公司僱人的方式及步驟。

他表示，一般的小公司，用人方式大約也差不多，但手續上略有些出入。

他說，美國公司僱人的第一步，當然是先取得求職者的名單，有下列幾個方式：

——透過職業介紹所介紹。

——透過大眾傳播工具傳播，譬如在報上刊登廣告。

——到大學中去找人。對一些大公司來講，需有新的年青人不斷加入，免得公司僵老硬化，所以到學校中直接找求職者名單，是他們常用的方式。

——個人的運籌。這是目前各公司最常用也最有效的方法，公司需要的人，由公司員工推存有能力的適合的人。

在取得求職者名單之後，接下來就是挑選適合的人來面試。

在面試時，負責面試的人不會問一些與工作上無直接關係的事。譬如你結婚了沒有？你房子租的買的？（但可問你住在那裏？）你究竟是中國人，還是越南人？（但可問你會幾種語言？）等等。

那麼面試時，會問些什麼問題？一般來說有——你個人的長短程目標如何？你計劃如何達成？

——五年以後，你想你會做什麼？

——你為什麼會選擇這個專業？

——你能不能描寫一下你自己？

——什麼樣的動機促使你會盡力而為？

——什麼樣的資格會使你做得成功？

——如果我們僱用你的話，你對公司會有什麼貢獻。

在面試之後，公司主要負責人會根據被面試者的學歷、經驗、所學廣度、應對、動機、負責精神、創造性如何等來決定錄取什麼人。

不錄用的人會收到通知，被計劃錄用的人會被問薪水問題，在雙方達成協議後就完成手續。

接下來，由現任TELOS公司計劃經理的郭榮俊，就求職者的觀點來講求職者應注意的事。

他說，根據有關單位在一千萬個求職者中的統計平均數字，一個人要找到一個合乎他理想的工作，必需從三個僱用通知（JOB OFFER）中來選擇。而要想得到三份被僱用的通知，必需至少要有六個公司給你面談機會，至少要寄出去五百份履歷表。

那麼履歷表怎麼寫？郭榮俊的建議是：長度以一頁為宜，最多不超過兩頁。需以打字機打好，以清晰明瞭為主，不要有錯別字，不要塗改刪除。平易務實，不作文章，不要包括自己的嗜好。可能的話，履歷表之後，附上一封信，簡單再說明一下自己。履歷表可以用複印的方式，同時寄出。

履歷表寄出去後如果沒有回音，可以打個電話去問。

當然，在找工作之前，要先問一下自己，那一類的工作較有出路；那一個工作可以讓自已學以致用；薪水應多少錢才合理等等。先問自己問好了，在面試時也可據以回答。

在面試時，要穿著整齊，態度自然，不要說謊，勿勉強作答。不過注意不要當場就決定接受或回絕你個工作，因為你可能同時會有幾個工作OFFER。

面試之後，切記當晚寄一張謝函給面試你的人。面試一個星期之後，如果沒有消息，不要猶豫，可打個電話給面試你的人，問他希望如何。

最後，洪會長補充，在面試時，美國人會五十分講十分，而中國人常謙虛會十分只表現五分，所以根據經驗，在面試的表現上，中國人很差，不要以為自己英文講不好就不敢說，因為人家也知道你不是美國人，英文說得沒他們好是一定的。所以不卑，不亢，表現自己成熟，上進，是應具的態度。

轉載自

世界日報

怎樣才能找到第一份工作？

訪事業計劃專家派姬·史密特

大學畢業生已供過於求

問：史密特小姐，年輕人剛出來找工作的情形有多困難？

答：以一九八一年的大學畢業生而言，競爭是很激烈的。這批剛畢業的學生，恰在當年世界大戰後多生嬰兒時代的末期。因此，許多工作已經由他們的哥哥或姊姊先佔了。

每年畢業的大學人數，已是供過於求。據勞工局的統計，每四個大學學生中，就有一人做不需大學程度的工作。

除此之外，中級管理人員也有愈來愈多的情形，因此也間接地阻止了年輕人向上上升的速度，這種情形至一九八〇年代末期時才會改善。

問：那些科系前途看好？

答：據今年初的統計，雖然工程科系的畢業生只佔所有大學生的百分之七，但其工作數量却是所有工作數量的百分之六十以上。其他熱門的科系是商科、會計、電腦、護理等。

問：找工作的人的學經歷或個性有那些受到雇主的重視呢？

雇主們希望也能寫也能講

答：一般雇主都希望大學生多學點英文及寫作的課程。演講也很重要，因為怎麼把你的看法去使別人相信，在任何行業都是很重要的。

問：找工作的人怎麼樣才能增加他找到好工作的機會呢？

答：據雇主說，很多人不知道他們要找工作是什麼。如果你知道自己想找什麼樣的工作，那就容易多了。

還有許多找工作的人根本不知道該做什麼。如果在事前能先在圖書館去查公司的資料，你對公司知道得愈多，也愈容易給一個好印象。

想找事的人何處得幫助

問：找工作的人在這裡可以得得到幫助？

答：如果你還在大學裡，則學校的工作介紹所是個好地方。如果已畢業，可向校友會、親戚、朋友等連絡，說明你想找工作。

問：在報上分類廣告欄或工作介紹所找工作如何？

答：這二個都是找事的途徑之一，但如果完全靠這二途徑，那就犯了大錯。因為這二途徑的競爭最大。想有一個好方法就是與你任談一談，如果不行，退而求其次，與他們手下談一談也是有益的。

履歷表簡潔面試不馬虎

問：一般在寫履歷表或面試時，常犯那些錯誤？

答：履歷表很重要，不能因它而得到工作，却因它而失去工作。履歷表上應書寫整齊，不要寫錯字，文法上也不要錯。其次，履歷表不必太長，一頁就夠了。把雇主有興趣的經驗和技術寫出來就行。

至於面試時，你應知道自己自己想要什麼。很多人以為雇主一定會問很多問題，但是你自己應準備許多問題，先問清楚，以免後來造成誤會。

問：如果你已找到了工作，怎樣才能在最短時間內變成公司內一個有價值的雇員呢？

答：只知道工作還是不夠的。你應知道你的工作與別人的關係，公司內的組織等等。誰是重要人物，聽誰的話。

課堂中所學需實際磨練

問：新到人員常犯的錯誤是那些？

答：大學畢業生最大的錯誤是以為自己很行，自己的想法公司在學校時功課多，仍需時間來證明你的能力。

問：新的女性工作人員，是否因不能加入男同事的圈子內而有些吃虧？

答：這種問題已愈來愈少。如果男同事去喝酒，以便談論公事，則你不得不去喝些酒。運動也是一樣，往往可縮短同事間的距離，因此女同學如能在學校裡學點高爾夫球、網球或跑步等，會很有幫助的。

與老板相處勿輕易爭論

問：與老闆相處的基本原則是什麼？

答：有些人以為與老闆的關係就好像過去與教授的關係一樣，其實根本不可能。老闆們總是把自己的利益放在前面。還有，除非事關緊要，千萬別與老闆爭論。只是你不明白罷了。如果你那裡學點東西，也是能從他那裡學點東西，也是

值得留下來的。如果老闆根本不喜歡你，最好另找地方的人。因為老闆不會提拔不喜歡的人。

問：你應加入公司裡的小集團嗎？

答：這得看情形而定。如果那小集團內有自然的重量人物在內，加入自然沒錯。但如加入不受重視或不肯上進的集團，則有害而無利。

問：一個新進人員如何掌握住內部競爭？

答：不論你工作的環境是「狗咬狗」，還是相處很融洽，你千萬別學別人的樣子。你要自問究竟自己的目標在那裡。還有與別人合作也很重要，因為「敬人者，人恆敬之」。

要克制自己絲毫不苟且

問：新進人員道德上應注意些什麼？

答：注意克制自己，應點小東西回去，起初也許沒拿的東西大了，那就可能讓你丟職失業。

問：新進人員如何克服歧視或被調職的事發生？

答：向上級告發是萬不得已時，才應採取的行動。你應找出被歧視的原因，設法克服它。

如被調職時，最好當時就堅拒，或明白告訴那人這樣會妨礙工作。

問：是否一般人都把第一個工作看得很重？

答：是的。第一個工作固然重要，但也不必患得患失，因為在四、五年內，公司內另外最好的人會離開。培養嗜好，萬一你因生手做錯事，也可有個訴苦或寄托處，生手犯錯是免不了的，千萬別看得太重，而自責太深。（譯自美國新聞與世界報導七月六日）

百事公司簡介 (Pepsico, Inc.) 王中

百事公司分成五個部門：飲料，食品類，食品供應，運輸搬家，及運動器具。每一部門發展自己的年計畫及目標去配合總公司的目標，正如腦與手的配合。

公司每年跳躍式的成長主要是以極高的品質為基石。更以主動積極的市場研究，誠實熱誠的服務為輔，這種健康的成長與大眾的每日生活都息息相關。

五個部門每一單元簡介于下。

(1). 飲料部：

(A). Pepsi-Cola Company (百事可樂). Diet Pepsi 每罐只含熱量一卡洛里吸引不少注意健康人士。另外分公司 Mountain Dew 由于急速成長在整個 soft drink 公司中名列第一。

(B). Pepsico International. 今天這部門可在 126 國家有 602 生產廠。最重要的是製造飲料精。飲料精配合水及其他附屬成份即成可樂。今年成長最快的國家有沙烏地阿拉伯，及埃及。中度成長的國家有

東歐, 巴西, 歐洲多爾, 墨西哥及委內瑞拉。

(2). 食品類部:

(A). 零食部: Frito-Lay 是 PepsiCo 最高利潤生產部門, 最近買下以 Oregon 為大本營的 Grandma Cookies Inc. 在這方面證明 Frito-Lay 不僅在鹹味零食部有其天地更在甜味零食也開始拓展領土。

(B). 國際零食部: PepsiCo Foods International (PFI) 是在百事成長最快的部門, 在 1980 年 PFI 的利潤在 Mexico, Canada, Brazil, Puerto Rico and Spain 打破過去的記錄。PFI 與台灣統一食品公司技術互助最近已有新產品推出在台灣銷售。

(3). 食品供應部: 在食品連鎖商店有 PIZZA HUT 和 Taco Bell. 不論是否 inflation 兩公司的 sale 仍有 17% 成長, 19% 的利潤。眾人皆知 Pizza Hut 遍佈北美各大小城市。Taco Bell 在一年中開了 171 新餐廳。

(4). 運輸搬家部: North American Van Lines 和

Lee Way Motor Freight. 也許諸位在搬家時用到 *Local American Van Lines*, 該公司確實做到服務到家。1980 inflation 的影響, 人口遷移現象受高 mortgage interest 打擊但該公司仍能增加 116% 的利潤真屬難能可貴。Lee Way 受了經濟影響, 但公司卻能在 fuel efficiency 上深入研究, 最近已有很好的成效。

(5). 運動器具: ^{Wilson Sporting Goods} 利潤在今年中已提高了三倍。該公司的市場研究是首屈一指。由於最近 Tennis 的普遍, 球拍及球的銷量真有供不應求之感, 公司即是精益求精。另外在高尔夫球上更是 Wilson 的天下。

拉拉雜雜的介紹百事公司, 說一偏萬者有很多不週全的地方請諸君多指教。此簡介是受 Peter Wan 及 Sherman Lin 多次鼓勵才敢謄寫出。有任何疑問請連絡 WILLIAM WANG, RSO Futaba Lay 900, Loop 12 north IRVING, TX 75007.

最後祝福諸君春節快樂。

安德遜-克雷頓公司 (Anderson Clayton Co)

安德遜-克雷頓公司 (Anderson Clayton Co) 創始於 1904 年初時以棉花交易為主，漸之發展成多元化的公司。並於 1945 開放對外售賣股票。它經營的項目有農作物的處理、食品及機械的製銷、保險、倉庫及商品之交易等。除了美國之外，在巴西及墨西哥也有相當規模的營業。去年 (1981) 全年總銷售為十九億美元，其中食品的產銷雖只佔四分之一，但營業額仍在逐年成長中。

公司總部設在休斯頓，全部員工在兩萬人左右。食品部門則設在達拉斯。它的產品包括以食用油脂為中心的 Salad Oil, Shortening, Seven Seas Salad Dressing, Chiffon Margarine 及不同程度的氫化油脂。乳製品方面則以 Natural Cheese 及 Cheese Analog 為主。提到 Cheese Analog，這家公司倒是有段精彩的奮鬥史。它是第一個公司將 Cheese Analog 在美國成功地產銷。

食品部門的的研究中心以公司的創始者之一命名——W.L. Clayton Research Center。全部工作人員約為九十餘人。研究中心內分設 QA/QC, Dairy, Non-dairy, Fats & Oils, Process Development and Engineering Service, Productivity 及 New Technology。最後兩個部為新增設者。過去研究中心的主要職責在於 Line Extension 及 Product Maintenance。將來會在生產效率之加強及引進新技術方面多下點工夫。這也是目前美國大小工業所一致努力的方向。

萬建心撰於達拉斯

WHAT IS FLAVOR

Most of us have faced flavor problems at one time or another in our professional career. A few of us are actually making a career out of doing flavor research. After 2 years post doctoral and 9 years industrial research on flavor, I have realized how complicated a flavor problem could be. However, I have also learned something about flavor and am willing to share my personal experience with our members with the hope that this short essay may shed some insight and help you diagnose your own particular flavor problems. As the old saying goes, "a problem well defined is a problem half solved".

Flavor of a food in Chinese terms is how a food tastes - good or bad. It consists of two essential characteristics - aroma and taste, but it is also influenced by other factors, i.e., color, texture, consistency, sound and custom. The aroma and taste are caused by organic and/or inorganic compounds. The aroma is contributed by volatile organic compounds, and the taste by non-volatile organic and inorganic compounds. In the flavor of a food, both the aroma and taste are very important. A very common misconception about flavor is flavor is just the aroma and the taste is neglected. For example, MSG and nucleotides are called flavor enhancers, but to me they are actually part of the flavor.

There are several different kinds of flavor problems faced by Food Technologists. It is important to recognize the nature of the flavor problem before a research project is planned. The flavor problem in food processing can be briefly described as follows:

1. Flavor in Natural State.

Fruits, fruit juice, milk are the prime examples. In processing these products, the common problem is that the desirable natural flavor will be partially lost and a cooked flavor will be developed. Fruits are also a good example for the importance of both aroma and taste. A good tasting pineapple should not only have good aroma, but also good juiciness, sweetness, and proper sourness. Canned pineapple is usually made of low grade fruit and syrup is added to counter the sour taste of the fruit.

2. Flavor Developed During Processing.

Processed meats and vegetables, fried foods (fish, chicken, chips), baked goods (bread, cookies, etc.), roasted nuts (coffee, peanuts, etc.) are prime examples. The raw material and finished product taste very different. The raw material contains specific flavor precursors which will produce specific flavor during processing. The quality of raw material and processing conditions become the determining factor on the flavor quality of finished product.

To solve flavor problems of this nature, one must study the mechanism of flavor formation, raw materials, and processing conditions. The most likeable solutions to this kind of flavor problem are derived from controlling raw material such as conditioning potatoes prior to potato chip frying and processing conditions such as time and temperature.

3. Flavor Removed During Processing.

This phenomena produces both desirable and undesirable results. It is undesirable when the essential flavor components are removed or changed but it is desirable when the off flavor of raw material is removed. The most notorious example for the latter case is the deodorization of fats and oils and the flavor purification of soy isolate.

4. Flavor Developed During Fermentation.

Cheese, yogurt, soy sauce, beer, wine, etc. are the prime examples. The starting material and finished products have totally different flavors. In these products, both the volatile aroma and non-volatile taste are very important. One cannot just concentrate on one property and neglect the other. Flavor of these products is developed during fermentation. The substrate, bacterial strain, fermentation temperature, time and post fermentation treatment all play an important role on the flavor of finished products. To produce a better and consistent product requires a thorough understanding of flavor formation mechanism.

5. Flavor Developed During Storage.

This is usually a troublesome phenomena. It determines the shelf life of the food product. Most of the cases are dealt with off flavor formation, which can be caused by microorganism spoilage, lipid oxidation, or browning reaction. Bacteriacides or antioxidants are commonly used as preservatives. Packaging materials with oxygen barrier properties are selected for packaging. Vacuum pack or inert gas flushing are practiced in keeping oxygen from contact with food lipid.

6. Flavor Added to Processed or Fabricated Foods.

In the case of processed foods, natural and/or artificial flavors are added. Natural flavor could be concentrated extract of food or spices. This subject could be covered with volumes of books. In the case of fabricated foods such as imitation meats, cheeses, butters (margarines), etc., natural and artificial flavors are added to imitate the flavor of target product. In other types of fabricated foods such as mayonnaise, salad dressing, etc., natural and artificial flavors are added to make the product taste good. The objective here is not necessarily to imitate any known generic food unless the target product is a competitive product.

The above discussion briefly deals with the nature of different flavor problems. A correct diagnosis of the problem is essential to deriving a correct answer and/or effective solution. In dealing with aroma problems, common approach is to isolate the aromatic material and identify it. Great precautions should be paid to the isolation step. The isolation should be conducted in a condition as mild as possible to avoid artifact formation. In the meantime, the sample should be representative of the actual volatile composition. Identifying the volatile composition is the first step not the end of flavor research. The key to the success is how to use the information to derive an answer and/or solution to the problem.

Another area of interest which often causes mysterious conception is the formulation of artificial flavors. The conventional approach is an artistical fashion but it can actually be done scientifically by the application of analytical instrument. The method has been successfully practiced in our Company. Because of its proprietary nature, it will not be discussed in this essay. Instrumentations most frequently used in aroma study are GC and GC/MS.

The non-volatile taste of food is a more complicated and difficult problem to deal with. This area may also include flavor precursor. GC and GC/MS have great limitations in this kind of research. Column and paper chromatography, HPLC, electrophoresis and other wet chemical methods are useful. The significance of non-volatile flavor is gradually being recognized and there is increasing interest and research done in this area. My personal opinion is the future flavor research on non-volatile will be exceeding or at least equal to the work on volatile.

The last, but not the least important concept about flavor is the theory of balance. A good flavor is like a piece of good symphony, which is composed of different notes at different volumes. It is very important that both the notes and volumes are correct. Even if the notes are right but the volumes of some notes are wrong, it will not be detectable when it is too low and will become an off note when it is too high. Another potential misconception is key components. Some food flavor has key component, such as benzaldehyde of almond extract and 2-methoxy-3-isobutyl pyrazine of green bell pepper, but a lot of food flavors are hard to pinpoint their key component. The one with key component is like a piano or violin concerto. The key is like the piano or violin, but other notes are also needed, just like a symphony orchestra is needed to play the concerto. 2-methoxy-3-isobutyl pyrazine can impart a green bell pepper note but a better flavor can be formulated when other components are properly blended into the formula. The flavor without identifiable key component is like a symphony. Every instrument plays a part but every instrument has to play the right note at the right volume. This balance theory does not only apply to the formulation of an artificial flavor, but also to the flavoring of a finished product. For example in formulating salad dressing, it requires proper combination of vinegar, MSG and salt. If vinegar is too much, the product will taste too tart; too much salt, too salty. If not enough of these ingredients, the product will taste too weak.

The discussions and statements in this short essay are the extract of my personal experience about flavor. They may or may not make any sense to you, but I hope it can at least help you to look at your own flavor problem in a more productive manner. In the future issues, we may discuss the specific area in a greater detail.

By: Sherman S. Lin
Anderson Clayton Foods
December 8, 1981

PROCESS DEVELOPMENT

By: Tony Chen

Process development serves a vital function in the industry. When process development is properly done, it will allow companies to transform innovative inventions into profits. In the chemical process industry, process development enjoys a very prestigious position. However, the food industry seems to either underplay or neglect the importance of this discipline.

Process development is not to make a bigger batch in the pilot plant as some of the food scientists and technologists conceived. Process development is a bridge between the successfully demonstrated product at the bench level to the profit making, efficiently run process at the production scale. Many promising inventions never got to the commercial stage because of improper development of the process.

The person who develops processes is called a process developer. Typically, a process developer is a chemical engineer because of the nature of his training. "Process developer" is analogous to an architect. An architect transforms a concept of a shelter into an attractive-looking functional home. A process developer, on the same token, transforms a novel idea into a feasible and economical process.

A typical procedure for process development is shown in Figure 1. Basically, five steps are involved. After a prototype or idea is born, a literature study and inter-group discussion should be exercised in order to avoid the possible embarrassment of "re-inventing the wheel". The second step which is process study, is the most critical step. Process has to be understood and unit operation has to be tested, optimized and scaled-up.

Following the process study, a process flowsheet can be easily generated. A process flowsheet is nothing but a summary of the optimized process which should include stream composition, material balance and energy balance. Once the process flowsheet is available, a process package can be developed. A process package should provide information such as: what is this process all about; what it contains as far as the material is concerned; and what are the criteria of the process.

The last, but not least, item for process development is for the developer to assist in detailed engineering of the process design or plant design and start-up. The start-up of a process is a real "pain in the rear". This writer had a painful experience working 24 hours straight on the start-up of a process which was originally thought to be a perfectly developed process.

As can be seen by now, developing a process involves many areas of expertise. A good process developer should be an efficient manager who can foresee problems, recognize talent and delegate authority. Process development is not a self-improvement exercise; therefore, do not try to learn everything by yourself. The consequence can be very expensive.

STEPS FOR PROCESS DEVELOPMENT

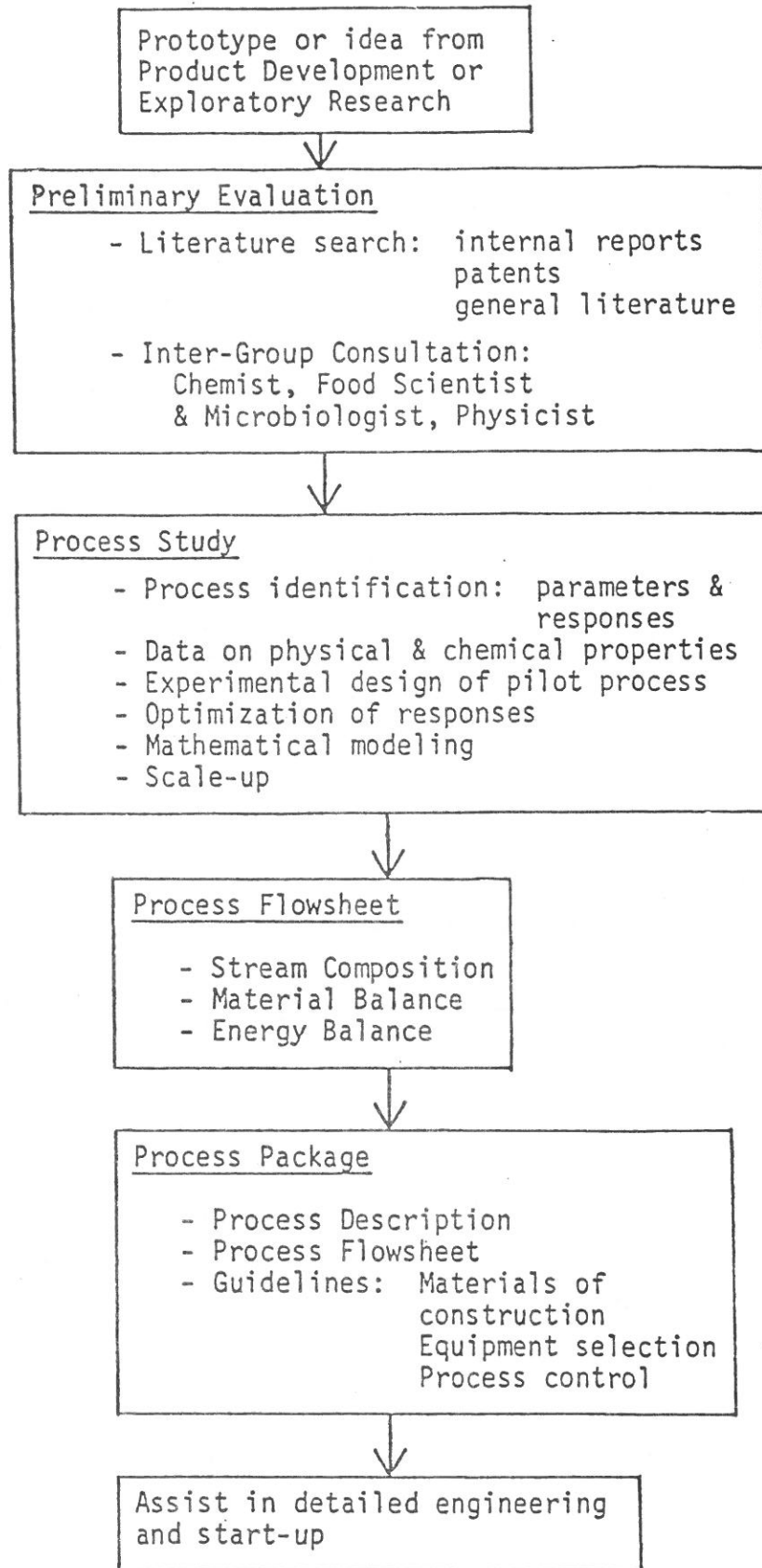


FIGURE 1

經濟部用箋

慶筠博士吾兄大鑒：

感謝吾兄之熱誠，為協助國內解決食品工業難題，肩負“顧問”委員會之重責。

國內近擬發展百香果汁等十四種產品及改進五種食品有關之技術（見附件），需要新知識及技術之引進，貴會會員多為學有專長且經驗豐富之食科學者專家，希望能對上列產品有關原料採收貯運、產製技術、機械設備、包裝容器、品質管制、衛生安全、國際市場及商情統計等項資料，就各位之專長，提供任何產品任何項目資料，將來或可成為技術專案計劃，或合作投資計劃，必要時將派員赴美求教或邀

(專供公務使用)

70. 5. 2004 @1004

經濟部用箋

請有關專家短期返國指導，差旅費可由本會報籌劃支付。為某項專題在國外如需要數百元小額暫時試驗材料費、樣品資料費，亦可由本會報籌撥。

專此奉達 即頌

研祺

弟 李 秀 敬 啟
七十、十、十



副本抄送林信南會長

(專供公務使用)

70. 5. 2004 @1004

附件一

70. 10. 10. 專案計劃項目(一)

壹、國內擬發展產品項目：

- 一、百香果汁
- 二、葡萄汁
- 三、冷凍蝦
- 四、罐頭蝦
- 五、鮪魚罐頭
- 六、螺肉罐頭
- 七、燻鰻
- 八、以雞肉為原料製造類似歐美火雞圓捲火腿
- 九、洋菇抽出濃縮液
- 十、蘆筍抽出濃縮液
- 十一、薑或老薑為原料之製品，如薑油
- 十二、利用中國青梅為原料之製品（梅乾、醃梅已有製品除外，如梅汁等）
- 十三、利用竹筍為原料之製品（筍罐、筍乾已有產品除外）

以農業產品爲原料之配料工業產品，如(1)香料(2)調味料(3)食用色素

(4) 酵素

註一、第一、七項請提供原料處理、最新產製技術、機械設備、包裝

容器、品管、運輸、衛生安全、國際市場及商情等有關資料。

第八、十項請提供最新產製技術、機械設備及商情資料。第

九項請提供產品名稱及最新產製技術(包括薑油及梅汁)。

註二、每一位專家僅需就其專長提供某些項之某些部份資料。

貳、國內擬發展之食品有關技術及所需資料：

一、馬口鐵皮應用於食品工業之技術、規格。

二、罐頭食品塗料及塗漆技術、設備檢驗。

三、罐頭食品空罐製造技術、機械設備、品管。

四、食品罐頭工廠節約熱、水、電能源之具體技術、設備及方法。

五、皮蛋、鹹蛋耐久衛生包裝法。

經 濟 部 用 箋

信南會長吾兄大鑒：

承吾兄等旅美食科學者專家屢次支援國內食品工業，非常感謝。

目前國內計劃推行十點研究項目（如附件）。現擬請吾兄按每項重點題目提供一至二名有實際經驗之旅美專家及其特別專長之資料，作為短期國內指導舉辦講習班之研究參考。

肅此奉達

順頌

春祺

李季

（專供公務使用）

五五八

重點題目	計畫概要	要
1. 中國式食品及冷凍食品工業化研究與發展	(1) 中式傳統加工食品工業化。 (2) 肉品加工研究發展。 (3) 冷凍食品發展之研究。 (4) 其他	6. 農漁牧原料之處理、保鮮、貯運等技術運用研究
2. 果汁產品研究發展與品質改善	(1) 百香果汁原料、加工、包裝、貯藏之研究。 (2) 梅汁之研究與發展 (3) 葡萄汁之加工研究。 (4) 蕃石榴汁之研究發展。	7. 發展食品配料及發酵利用之研究
3. 水產品利用及品質改進之研究發展	(1) 冷凍蝦原料保鮮，配合機械化生產程序控制品質之研究。 (2) 鮭、鯉類罐頭製程標準化研究。 (3) 鯉節原料選擇、加工、包裝及工業化研究與發展。	8. 食品加工機械包裝及自動化之引進研究與示範研究
4. 食品衛生安全之研究	(1) 主要農畜漁產食品殘留重金屬、化學添加物、PCB、農藥、抗生素、有害毒素等污染情形之調查。 (2) 塑膠包裝材料安全性之研究。 (3) 進口食品衛生安全之研究。 (4) 食品檢驗標準方法之確立研究。 (5) 編撰食品衛生安全教育手冊，食品工廠輔導。	9. 食品新產品研究發展與品質改善
5. 改進食品包裝容器及材料應用之研究	(1) 空罐焊錫槽邊抽風設備，錫心之修改設計研究。 (2) 空罐輸送系統之改進。 (3) 鹽漬品包裝改進研究。	10. 食用油脂之研究與發展
	(1) 食用油脂及下脚再加工之研究 (2) 棕油之應用研究 (3) 米糠油抽取及副產品利用研究	(1) 罐頭工廠自動化機械系統設計之研究 (2) 農畜漁產廢棄物高價利用研究 (3) 低糖高風味及西式蜜餞加工、包裝、貯藏之研究 (4) 健康食品之研究 (5) 洋菇及蘆筍抽出物製成高價混合調味料之研究 (6) 米類食品之研究 (7) 其他
	(1) 蘆果加工原料採收、保鮮、貯運之研究 (2) 魚類、蝦類加工原料之保鮮研究。 (3) 低鹽度鹽漬蔬 果原料品質之規格及檢驗法之研究	(1) 中式食品特有香料之研究 (2) 水果香料之發展 (3) 高級薑產品之發展 (4) 發酵食品之研究 (5) 有調食用色素、抗氧化劑、調味料、酵素之研究 (6) 低酸、低鹽漬冷藏蔬菜之研究 (7) 農村小型加工事業品質改進研究



海外華裔包裝學會
 OVERSEAS CHINESE PACKAGING INSTITUTE
 WORLD HEADQUARTERS: P. O. BOX 142, HILLSDALE, N. J. 07642, U. S. A
 Telephone: (201) 391-8438

Dear Sherman:

這次很高興能與你見面討論如何協助台灣
 會之業心得甚多。

已將教會所開有關包裝之講習班回國
 委託張天鴻君作為參考。

隨函隨上“海外華裔包裝學會簡介”
 一份，希望借用貴會之刊刊登出，並請代
 為介紹會員。

如此 敬祝

愉快



李錦文

十二月二日

海外華裔包裝學會簡介

起錄：

僑居及落籍美國及加拿大的華裔包裝科技人員，歷盡艱辛，業已在美加奠定了良好之事業基礎，社會地位亦逐漸提高，且在包裝科技方面建立了良好的聲望，為了保持這種卓越的地位，抑益以發揚光大，因此在美加同仁認為有組織本學會之必要，而本會即在1980年4月23日正式成立。成立之初定名為“旅美加華裔包裝科技學會”但因會員分佈之地日廣，因此由全體會員大會通過于1982年1月1日起改為現在名稱。

宗旨：

- 一、本會為一非營利，無黨派的組織，會員包括居住在海外的華裔專業人士。
- 二、加強華裔專業人員的聯繫，進行科技交流活動，並舉辦互助事業。
- 三、通過各種途徑，保護華人在海外之權益以提高其學術，工作及社會之地位。
- 四、促進與祖國包裝科技交流，本會專業人員願貢獻所學，為國服務。

組織：

- 一、本會設會長一人、副會長二人、秘書一人、財務一人及理事四人。

二、以會員分佈情況共分六個分會：

- 1 美東分會
- 2 美西分會
- 3 美南分會
- 4 美北分會
- 5 加拿大分會
- 6 東南亞分會

三、以會員專業分為下列九組：

- 1 食品及飲料包裝科技組
- 2 醫葯包裝科技組
- 3 化粧品及日用品包裝科技組
- 4 工商業產品包裝科技組
- 5 包裝材料研究發展組
- 6 包裝材料製造組
- 7 包裝機械設計及製造組
- 8 產品倉儲、運輸及工業工程科技組
- 9 電腦科技應用組

服務範圍：

- 一、協助包裝事業機構發展包裝科技，改進產品包裝及推動產品包裝之研究。
- 二、提供包裝改善服務，投資前調查研究，可行性研究，工程設計、設備製造、採購檢驗、管理顧問、工業工程及工業資料諮詢。

三、舉辦有關產品包裝科技之演講會、座談會及講習班。

四、編譯有關包裝科技之最新資料。

五、聯絡中國包裝機構交換包裝科技資料。

會址：

Overseas Chinese Packaging Institute P.O. Box 142, Hillsdale,
N.J. 07642, U. S. A.

※如本會可以為您服務之處請與本會會長直接聯絡。

PROFESSIONAL NEWS

The Newsletter is yours. Any worthwhile information or news should be sent to the attention of the President, Sherman S. Lin or the Secretary, Peter J. Wan as early as possible. The address is:

Anderson Clayton Foods
3333 N. Central Expressway
Richardson, Texas 75080
Telephone: (214) 231-6121

1. Dr. W. H. Chang (張為憲教授) of the Graduate Institute of Food Science and Technology, National Taiwan University Taipei, Taiwan, Republic of China, asked the members of ACFSTA to respond to a faculty position.

Area of Discipline:	Food Processing and/or Food Engineering
Qualification:	Ph.D. or M.S. with more than five years experience
Date:	Either February or September, 1982
Duration:	Permanent or Short Term
Salary:	Please contact Prof. W. H. Chang directly
2. Dr. Tony Chen of Anderson Clayton Foods has recently been promoted to the Director of New Technology Department. This is a position only next to the Vice President of the Research Center.
3. CACA (Chinese American Chemical Association) has established an active dialogue with ACFSTA. CACA will form a Food Preservation Technology Team and has invited several of our members to serve the team.
4. Mr. Lee, Shiu, MOEA, ROC also sent to Dr. Sherman Lin a copy of report entitled: "台灣蘆筍罐頭品質改進緊急措施辦理情形報告"
Any member interested in getting a copy should write to Dr. S. Lin, 3333 N. Central Expressway, Richardson, Texas 75080.
5. Advisory Committee to Taiwan's Food Industry held its second meeting in November 1981 in New Brunswick, New Jersey. Our President, Sherman Lin, was invited and attended the meeting. Suggestion was made to improve and strengthen the relationship between the Advisory Committee and ACFSTA.

REMINDER FOR 1981-1982 MEMBERSHIP DUES

From Your Treasurer

Since the last issue of the Newsletter (October, 1981), I have received forty-one membership dues plus one new corporate member. Their names are listed below. If you have sent your dues, yet your name is not among the list, please remind me. For those who have not paid their dues, I am attaching the same membership dues invoice. Your return check serves as the receipt. Should a formal receipt be desired, please inform me.

I hope you will send in your membership dues at your earliest convenience and thank you for your support.

Student Members

Wei, Tsao-Ming
Woo, Alexander H.Y.
Chen, I-Tsuen
Hsu, Shun-Yao
Sheu, Ming-Jen
Wu, Fu-Yu
Yeh, Sing-Wood

Lee, Jen-Perng
Huang, Maylee
Chang, Shone
Mai, Jim-Bin
Chiang, Been-Huang
Jwuang, Wenli J.

Professional Members

Huang, Willian
Hsieh, Dean Shui-Tien
Chen, Tsun-Chieh
Keo, Joseph D.
*Chung, Cecil S.
*Wan, Peter J.
Huang, An Shun
Chen, Tung Shan
Wang, Y. David
Hu, Kwoh H.
*Yiu, Ann Choy
Peng, Ing C.
Liao, Fu Tarng
Lee, Ken N.
Shian, Shi-Yen

Tao, Kak Yuen
*Lin, Santa
Lee, Yanien
Chen, Tony
Wu, Hsien Chih
Nip, W. K.
Hsieh, An-Li
Hsu, Wen-Pin
*Lin, Sherman
Yao, Y. C.
Wu, Victor
*Cheng, Hsiung
Wu, Jiann-Jiu
*Lin, Yi-Do
Lin, Paul M.
**Yang, J. H.

*Supporting Member
**Honorary Member

Corporate Members

Great Wall Enterprise Co., Ltd.
Jadine Food Products, Inc.