zones of inhibition were calculated by the following semi-quantitative scales: (-), 0 cm growth inhibition; (+/−), <2 cm growth inhibition; (++), <3 cm growth inhibition; (+++), <4 cm growth inhibition; (++++), <5 cm growth inhibition; (+++++), <8.5 cm growth inhibition; (++++++), >8.5 cm growth inhibition.

Bacteriostatic activity test of heat-killed LAB: The LAB strains were kept at 37°C in cystine-added MRS broth to the third generation, and then they were heated at 100°C for 1 hour. The density was regulated to 1×10^9 cfu/mL for co-culture with GBS. The plates were incubated at 37°C for 48 hours and the survival rates of GBS were determined. After sufficient growth, the zones of inhibition of the pathogens were calculated according to the following semi-quantitative scales: (0),≧100% survival rate; (1) <100% survival rate; (2) <80% survival rate; (3) <60% survival rate; (4) <40% survival rate; (5) <20% survival rate; (6) 0%–10% survival rate.

Results: *The bacteriostatic abilities of different viable LAB against GBS:* The viable LAB bacteriostatic ability showed that *B. lactis (CP-9)* had the best anti-GBS ability, whereas *L. lactis* (LY-66), *S. thermophiles* (SY-66), and *L. reuteri* (GL-104) had the lowest activity. The components of *B. lactis* (BB12) and *L. acidophilus* (SLIM01, OLP-01, TYCA06) also showed high anti-GBS ability (Figure 1).

The bacteriostatic abilities of different heat-killed LAB against GBS: In the heat-killed LAB experiment, the components of *B. bifidum* (Bb-2379; BU087) and *B. longum* (GB-1496) had the best anti-GBS activity, followed by *L. gasseri* (LG21) and *L. plantarum* (TSP05); whereas *L. plantarum* (LPL28) and *L. rhamnosus* (F-1) had the lowest activity (Figure 2).

Conclusions: Our results demonstrated that lactic acid bacteria in both viable and heat-killed forms possessed bacteriostatic activities against Group B Streptococcus in addition with the ranking of bacteriostatic ability. Considering its lack of adverse side effects compared with antibiotics, the probiotic may be of health benefits to those at risk of GBS infection.

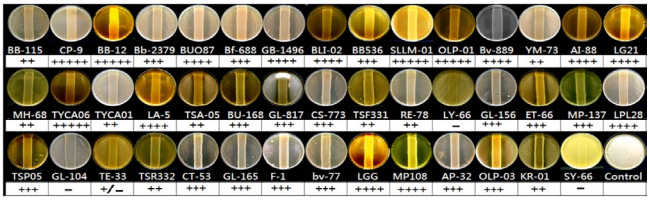
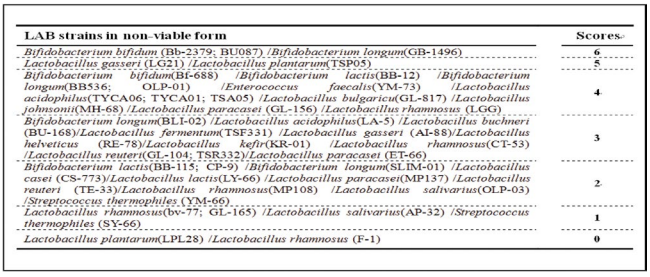


Figure 1. Bacteriostatic abilities of viable LAB against GBS.



LAB strains in non-viable form	Scores
Bifidobacterium bifidum (Bb-2379; BU087) /*Bifidobacterium longum*(GB-1496)	6
Lactobacillus gasseri (LG21) /*Lactobacillus plantarum*(TSP05)	5
Bifidobacterium bifidum(Bf-688) /*Bifidobacterium lactis*(BB-12) /*Bifidobacterium longum*(BB536; OLP-01) /*Enterococcus faecalis*(YM-73) /*Lactobacillus acidophilus*(TYCA06; TYCA01; TSA05) /*Lactobacillus bulgaricu*(GL-817) /*Lactobacillus johnsonii*(MH-68) /*Lactobacillus paracasei* (GL-156) /*Lactobacillus rhamnosus* (LGG)	4
Bifidobacterium longum(BLI-02) /*Lactobacillus acidophilus*(LA-5) /*Lactobacillus buchneri* (BU-168)/*Lactobacillus fermentum*(TSF331) /*Lactobacillus gasseri* (AI-88)/*Lactobacillus helveticus* (RE-78)/*Lactobacillus kefir*(KR-01) /*Lactobacillus rhamnosus*(CT-53) /*Lactobacillus reuteri*(GL-104; TSR332)/*Lactobacillus paracasei* (ET-66)	3
Bifidobacterium lactis(BB-115; CP-9) /*Bifidobacterium longum*(SLIM-01) /*Lactobacillus casei* (CS-773)/*Lactobacillus lactis*(LY-66) /*Lactobacillus paracasei*(MP137) /*Lactobacillus reuteri* (TE-33)/*Lactobacillus rhamnosus*(MP108) /*Lactobacillus salivarius*(OLP-03) /*Streptococcus thermophiles* (YM-66)	2
Lactobacillus rhamnosus(bv-77; GL-165) /*Lactobacillus salivarius*(AP-32) /*Streptococcus thermophiles* (SY-66)	1
Lactobacillus plantarum(LPL28) /*Lactobacillus rhamnosus* (F-1)	0

Figure 2. Bacteriostatic abilities of heat-killed LAB against GBS

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014 | The fast turnaround research about servo control strategy

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Objectives: The traditional brick benches have problems such as excessive starting torque and long time during start-up and stop. Some application scenarios that require rapid turnaround of the turntable require small torque motors, quick start stop turntables, and stable tracking for servo control. In this context, the current servo control strategy of the turntable is optimized, and a more advanced servo control method is adopted to control the start and stop processes of the turntable to improve its fast turnaround capability.

Methods: The pre-starting and small-range swinging method overcomes the large friction force of the turntable from rest to motion, and realizes the quick start of the turntable. The turret is oscillated by the servo before accepting the start task, which consumes very little power. In addition, the rapid stop of the turntable is realized by the overshoot mode, and the rotation speed of the turntable and the counter electromotive force deceleration time are calculated according to the instruction of the rotation angle. The quick stop of the turntable is realized by one callback, and in this process, the rotation speed of the turntable is not lowered, and the turntable is quickly turned.

Results: This servo control strategy enables a turntable to achieve fast turnaround in 1 second, while the traditional start-stop servo control method takes 2 seconds.

Conclusions: The fast turn-off servo control strategy enables fast start and stop of the turntable. Fine-tuning the control strategy in the way of big data learning can achieve effective adaptation of the strategy to a specific turntable.

Keywords: Servo control, Turntable, Control strategy, Fast turnaround, Start and stop.

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015 | Research on behavioral science training method of contemporary college students' ideological and political education

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Introduction: Human behavior is the embodiment of thought. Behavior not only obeys thought, but also strengthens thought, feedback consciousness and influences idea. In the Three Kingdoms period, Liu Bei educated his son "not to do evil in a small way, not to do good in a small way" and Tao Xingzhi thought that educating people should "combine knowledge with practice". The survey found that the ideological and political qualities of contemporary college students have declined, while the pure political theory education is slightly fatigued. Therefore, it is urgent to use behavioral science training to shape college students to become super-hard, red and professional successors.

Research methods: By using the methods of literature, questionnaire, interview with experts and experience exchange, this paper investigates, analyses and demonstrates college students' political thoughts and behavior habits.

The results are as follows: The study finds that contemporary college students have different degrees of ideological decadence: the world outlook in the Internet era, the values in the context of market economy and the outlook on life in the period of peaceful development have also changed. These "three outlooks" affect college students' study, employment, spouse selection and interpersonal communication, among which negative ideas have entertainment enjoyment. Vanity comparison, narrow selfishness, idleness and political indifference, etc. It can be seen that ideological and political education can no longer reverse the current decline by theoretical enlightenment. It is necessary to inject behavioral science into the practice of training methods to change. Specific measures can be summarized as follows: 1. Programming ideological and political education content by mobile phone, making it into "learning-answering-integral" APP mode to strengthen brainwashing; 2. Setting up aspirations; Volunteer training platform, joint student unions, associations and other strengthening volunteer team development and expansion, extensive participation in patriotism and social public welfare activities; 3. Integrate ideological and political training into public classes (such as pedagogy, psychology, Mao Ze, physical education, freshmen military training, flag class training, etc.), and as credit evaluation and scholarship. Grade reference; 4. Establish a platform for ideological and political consideration, regularly commend advanced moral models, punish and rescue measures for students who violate discipline, violate public morality and have poor political quality; 5. Establish a "monthly donation" charitable foundation with the characteristics of our school, encourage students to donate several yuan a month, and use the donations for poverty alleviation. 6. Colleges and universities should strengthen the construction and management of college student party members.

Conclusion: Training, managing and improving college students' ideological and political quality with behavioral science methods make up for the deficiencies of knowledge indoctrination and theoretical preaching, can greatly improve college students' consciousness, self-discipline and self-reflection, and let them realize that action is a powerful weapon for shaping ideas. As the saying goes: habits grow into habits, habits grow into personalities, personality determines fate! Character makes a man.

017 | Assessment of bacteriostatic activities of viable and non-viable lactic acid bacteria against methicillin-resistant *Staphylococcus aureus*

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Objectives: *Staphylococcus aureus* is a significant human pathogen causing a huge health and economic burden worldwide [1]. Methicillin-resistant *Staphylococcus aureus* (MRSA) is responsible for several refractory infections in humans, including pneumonia, bone, joint, skin, soft tissue, central nervous system infections as well as bacteremia and endocarditis. Because MRSA poses a major public health threat, there is a renewed interest in pharmacologic treatment against the pathogen [2]. The term "probiotics", which stands for microorganisms able to offer health benefits via improving or restoring intestinal flora, has been proposed as a biological treatment strategy against immunological and gastrointestinal dysfunction [3], particularly in the treatment of *Clostridium difficile* infection in adults and pediatric antibiotic-associated diarrhea [4]. In